27-2-d-2

REF 92:61

CONTEMPORARY MEDICAL MEN.

Digitized by the Internet Archive
in 2016

https://archive.org/details/b28038629_0002

Yours faithfully
Alfred Albert

CONTEMPORARY MEDICAL MEN

AND THEIR

PROFESSIONAL WORK:

BIOGRAPHIES OF LEADING PHYSICIANS AND SURGEONS, WITH PORTRAITS,

FROM THE

"*PROVINCIAL MEDICAL JOURNAL.*"

EDITED AND EXTENDED BY

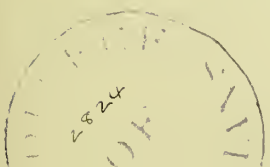
JOHN LEYLAND.

VOL. II.

Leicester:

OFFICE OF THE "PROVINCIAL MEDICAL JOURNAL," FRIAR LANE.

1888.



R E F

ROYAL COLLEGE OF PHYSICIANS
LIBRARY

CLASS	92:61
ACCN.	5428
SOURCE	Graham c 60 phy-
DATE	17.6.30

PRINTED BY W. H. LEAD, LEICESTER.

INDEX.

THOMAS CLIFFORD ALLBUTT,

M.A., M.D., F.R.C.P., F.R.S., F.L.S., J.P.

DR. CLIFFORD ALLBUTT was born at the Vicarage of Dewsbury, in the year 1836. The Rev. Thomas Allbutt, his father, who was appointed vicar of the ancient and important parish of Dewsbury by the Lord Chancellor, soon after leaving Cambridge, was a member of a family of literary and professional men, and was himself not only a leading churchman, but a man of cultivated literary tastes, a good botanist, and an ardent gardener and lover of country pursuits, which family tendencies are strongly manifested in his son. The vicar's grandfather was a friend of Hutton and Priestley, and one of the early contributors to the *Gentleman's Magazine*, and his father enjoyed the friendship of the Howitts, the Wedgwoods, Leigh Hunt, and others of the lesser literary people of the day. The Rev. Thomas Allbutt afterwards became rector of Debach-cum-Boulge, in Suffolk, where he died. He married for his first wife, by whom he had two children, Marianne, a younger sister of the Misses Wooler, of Roe Head, so well-known as the friends of Charlotte Brontë, and as women of singular sweetness and elevation of character. Miss Wooler, so often spoken of by Mrs. Gaskell, Miss A. M. F. Robinson, Mr. T. Wemyss Reid, and Mr. F. A. Leyland, in their writings on the Brontës, died in 1885, at the age of ninety-three, her faculties being undimmed almost to the last.

Thomas Clifford Allbutt was educated, first by a private tutor, in the Isle of Wight, and afterwards under the late Archdeacon Hey, at St. Peter's School, in York, an institution then largely resorted to by the Yorkshire families. His abiding friendship with the Heys, and with Canon Heald, the Vicar of Birstall, his accomplished neighbour, stimulated his early tastes in the direction of contrapuntal music. From the sixth form at York he went up to Caius College, Cambridge, well prepared in Classical studies, to which he has since been deeply attached, so that he readily became a Classical scholar in that college. Falling, however, under the influence of Lord Lindsay's "Early Christian Art," and of the Pre-Raphaelite movement, he travelled in Italy with some idea of art as a profession. But, in painting, as in music, it soon appeared that he had no special gift of expression. About this time, moreover, his whole mental attitude was transformed as if by sudden revelation. One afternoon, in a London club, he took up a volume of Comte's "Philosophie Positive," a work which he has never ceased to regard as relatively the greatest in philosophy ever given to

the world; and from that moment his heart was thrown into a love for science, and he read for the Science Tripos, graduating in 1859 as First Class, with distinctions in Chemistry and Geology.

He now definitely decided to enter the profession of Medicine, in which four of his uncles, paternal and maternal, were then successfully engaged. Happily, he had the great privilege of entering into the classes of Sir George Paget and Professor Humphry, to whom he remains under the deepest obligations. From Addenbrooke's Hospital he removed to St. George's, where he was Clinical Clerk, first to Dr. Fuller, from whose laborious accuracy and conscientious practice of therapeutics he gained greatly, and afterwards under Dr. Bence Jones, whose sceptical methods of teaching formed the greatest contrast to those of his junior colleague, but whose rapid clinical insight and bright stimulating intellect attracted his pupil to remain more than twelve months under his influence. Under Bence Jones' advice, Clifford Allbutt placed himself under Trousseau, at the Hôtel Dieu, with whom he enjoyed special opportunities of friendship and instruction. Trousseau invited Allbutt to translate the "Clinique Medicale," but circumstances at that time were not favourable to the completion of the project. Mr. Allbutt also spent some time with Bazin, at St. Louis, and expresses to this day the deep debt which he owes to that great dermatologist, whose views in former years he endeavoured to impress upon English readers. He also became a member of Duchenne's *Clinique* in the Boulevard des Capucines, at the time when that great clinician was differentiating the diseases of the central nervous system; and the friendship thus formed lasted until the great teacher's death, as did also a warm student's friendship with Maurice Raynaud, whose early decease was so great a loss to literature and to medicine. Raynaud was at that time *Interne* at the Neckar Hospital for Women and Children, where Allbutt spent most of his spare hours during his year in Paris.

A few months spent in London, with a view to practice, convinced him that a life in the metropolis would never be to his taste, and he decided to settle in Leeds, in 1862, partly on account of his large acquaintance among the Yorkshire families, and partly because, of all large towns, Leeds and Sheffield have the most immediate access to country scenes and life. On his coming to Leeds in 1862, Dr. Clifford Allbutt was elected Physician to the Leeds Fever Hospital, taking sole honorary charge of that institution for several years, during which time severe epidemics of typhus fever and small-pox occurred. Struck by a remark of his friend, Professor Rolleston, that in the Irish fever so many victims recovered who had actually been laid out in the open air to die, Dr. Allbutt had the whole of his ninety patients put under similar conditions by nailing the windows of the ward wide open. Ample bed-clothing was supplied, large fires were kept up, and the attendants were warmly clothed. The origin and results of

this system, in the marked diminution of mortality, we find set forth in a paper on the subject, read by Dr. Allbutt to the Epidemiological Society in 1862, which attracted much attention from the sanitary authorities of the day. We read that he also endeavoured to remove the cause of these epidemics by promoting a company to build blocks of houses for the working classes of Leeds, and by forming the "Leeds Sanitary Association," which did a great work there for several years, and ultimately secured the election of a medical officer of health and the formation of a more active sanitary department in the Town Council.

Dr. Allbutt, was at this time a more or less regular contributor to the "Quarterly," "Westminster," and other reviews, and formed close friendships with Lewes and Mrs. Lewes, and other eminent writers of the day. He declines, however, to refer in detail to these articles which he regards as having but a transitory value. On his election, moreover, to the Leeds Infirmary in 1864, he threw his whole energies into clinical teaching, and formed large and successful classes at a time when systematic clinical teaching was not so well-known as at present. He was an indefatigable worker and a copious writer. His articles were thenceforward, however, almost wholly on professional subjects. Even in his early years Dr. Allbutt's writings and teachings were alike vivid and logical, and were possessed of a virtue of style which made them eminently readable and effective. He has, indeed, always been anxious that physicians should never become careless as to the literary value of their writings. His essays on the Medicine of the Greeks, commenced in the *Medico-Chirurgical Review*, attracted the attention of Dr. Greenhill and of Dr. Daremberg, but the series came to an untimely end with the life of that journal itself. During the editorship of Dr. Ogle, Clifford Allbutt had written regularly for the *Review*. An intimate friendship with Mr. Pridgin Teale led him at this time to the use of the ophthalmoscope, and to study its application in medical diagnosis. On this subject he published in 1868 his well-known volume on "The Ophthalmoscope in Medicine," dedicated to Dr. Hughlings Jackson. This work, and the publication in St. George's Hospital Reports for 1869 of the first recorded case in England of Charcot's joint disease, not only procured him the friendship of that master, but placed him in the first rank of contemporary students of nervous disease. About the same time he published other essays on nervous diseases that attracted much attention, amongst which may be especially named the papers on the Ophthalmic Signs of Insanity, in which the observation of atrophy of the optic nerves in general paralysis of the insane was made contemporaneously with its description in Germany by Westphal. He was the first also to demonstrate the pathology of Hydrophobia, and his researches on Tetanus were only anticipated by his friend, Lockhart Clarke. Some remarks by Dr. Allbutt on the Phenomena of Locomotor Ataxy were read at the

Meeting of the British Medical Association in August, 1868, and were followed by a memorable discussion in which Duchenne, Lewes, Gairdner, and others took part. "On Visceral Neuralgia," was the title of a paper afterwards developed into the more recently published "Gulstonian Lectures" on "Visceral Neuroses." In another department of medicine, Dr. Clifford Allbutt's paper on "Typhus and Enteric Fevers, and their Modes of Propagation," has denied the spontaneous origin of enteric fever, and in specific instances has disproved it. His papers on Diseases of the Pleura are summed up in the article under that title in Quain's "Dictionary of Medicine." Those on Skin Affections have been directed chiefly to their value as indications in the classification of diseases.

Touching Dr. Allbutt's work on Phthisis, we may especially refer to papers on its treatment at great altitudes, which appeared in the *Lancet* in the years 1877, 1878, and 1879. Dr. Clifford Allbutt has been an alpine climber for many years, and in the *Proceedings* of the Royal Society, 1871, No. 126, is to be found a series of observations of his on the "Temperature of the Body during Mountain Excursions." In this connection we may also mention his introduction of the "Short Clinical Thermometer," made for him by the firm of Harvey and Reynolds, of Leeds, an improvement which first led to the universal employment of the clinical thermometer in general practice. Dr. Allbutt's last work was in conjunction with Mr. Teale on the "Causation and Treatment of Scrofulous Neck," (Churchill, 1886) the whole edition of which was exhausted in a few weeks.

Of these writings, and more especially of Dr. Allbutt's public addresses, delivered on various occasions, a well-known journalist—himself no mean man of letters—says that we find the graceful exhibition of scholarly attainments, blending humour with insight and sympathy, and clothing lofty thoughts in pure and simple language. Speaking of the Gulstonian Lectures on "Visceral Neuroses," the *Edinburgh Medical Journal* says: "If anyone has not yet read these delightful lectures, he has a great treat in store for him, for they are without doubt as refreshing to the weary brain of the medical man as a Highland breeze is to his jaded body." Dr. Allbutt's style is the style of a man of wide cultivation, of generalizing logical intellect rather than of methodic memory, and of strong inclination to think for himself, and to proceed on his own lines. As a lecturer, he was very popular, and had large and attentive audiences. His clinical lectures were delivered wholly without notes, and his formal lectures on Medicine were delivered only from a syllabus. His delivery was spirited, easy, and attractive; and he had especial tact in knowing where the tiro's difficulties would be found, so that he never "lectured above the heads" of the students. His large experience, ready power of illustration, and personal interest in his class, made these lectures very valuable. Dr. Norman Porritt published

some of them, from shorthand reports, in the *Students' Journal;* but Dr. Allbutt always believed that the style of his oral lectures was unsuited for perusal in print. His teaching in the wards was peculiarly his own, especially in his preference of the commonest diseases and the more backward pupils. He was accustomed to say that his dunces often turned out the best practitioners. Himself very rapid in diagnosis, when alone with advanced students, he could take the keenest interest in rare and obscure cases, but in class his method was to take such a case as chronic bronchitis, and to call up an average student, and patiently and kindly to point out the small beginnings of his knowledge, and thence lead him, before the rest, to reason out the whole length of the morbid series, from the healthy state onwards, enlarging and illustrating the phenomena, as they were followed out, in such a way that the most advanced hearers could not fail to find instruction also. Both as a teacher and as an Examiner of Cambridge, his method was always to try to find out, not what a candidate did not know, but what he did know.

Dr. Allbutt is a man of strong views on the question of "Specialism out-specialized," at which he has dealt a blow in his volume of Gulstonian Lectures, where also he has some trenchant remarks on the unfortunate neuralgic women "under the wand of the gynæcologist." "However bitter and repeated may be her visceral neuralgia," he says, "she is either told that she is hysterical, or that it is all uterus. In the first place she is comparatively fortunate, for she is only slighted; in the second case she is entangled in the net of the gynæcologist, who finds her uterus, like her nose, a little on one side; or again, like that organ, is running a little; or it is as flabby as her biceps; so that the unhappy viscus is impaled upon a stem, or perched upon a prop, or is painted with carbolic acid every week in the year, except during the long vacation, when the gynæcologist is grouse shooting, or salmon catching, or leading the fashion in the Upper Engadine. Her mind, thus fastened to a more or less nasty mystery, becomes nervously apprehensive, and physically introspective, and the morbid chains are rivetted more strongly than ever. Arraign the uterus, and you fix in the woman the arrow of hypochondria, it may be for life."

For more than a quarter of a century Dr. Allbutt has conducted one of the largest, if not the largest, consulting medical practice out of London. It is interesting to consider how this success has been obtained and maintained. When he first settled in Leeds, the prospect before him was not very bright; consulting practice, both medical and surgical, was firmly held by men in the prime of life, and there were plenty of eager aspirants for their places. But Allbutt settled down quietly and unobtrusively, throwing himself with zeal and energy into all the unpaid professional work that came in his way, whether at the Dispensary, the Fever Hospital, or at the General Infirmary. After his election on the staff, he always went to his work thoroughly, thoughtfully,

and scientifically. Dr. Allbutt has himself given us some account of his reception in Leeds, in his Presidential Address at the School of Medicine there, in 1878. In acknowledging the honour of his election to the Presidential chair, he spoke with warm gratitude to the profession in Yorkshire, for the kindly welcome which he had received in Leeds twenty years before, and for the generous confidence and friendship extended to him from that time. He alluded to the sense of brotherhood existing among the medical men in the neighbourhood, which he attributed to the example of those fathers of the profession who founded the Medical School. "I can never forget," he continued, "the admiration with which, on my first coming to Leeds, and visiting the operating theatre of that hospital, I saw Mr. S. Smith, Mr. Teale, and Mr. Hey, all as earnestly and as self-forgetfully busy with the operations of each, as three schoolboys might be with their Latin verses, not hesitating to counsel and correct each other, not caring to claim shares in a common success; and the world knows how great were the successes of those distinguished surgeons."

As then, so it is now, at the Leeds Infirmary, caring more for their art than for themselves, the triumphs of each are the honours of all. This perfect freedom of intercourse, and the ready passage not only of public, but also of private patients, from one member of the staff to another, favours the progress of surgery and medicine, and purges professional life of individual narrowness and jealousy.

For a few years Dr. Allbutt's practice was chiefly outside of Leeds, among certain large families in the county, but Mr. Teale's death, in 1867, and Dr. Chadwick's break-down in health somewhat later, caused a great opening in consulting medicine in Leeds itself, and Dr. Allbutt came rapidly to the front, soon obtaining a practice ranging in extent from the Trent to the Tyne, which he has held until now, and which, with health, he should maintain for years to come. To the general practitioner, as well as to the patient, his presence in consultation is a comfort and support. The ordinary attendant feels that his position with the patient is maintained and strengthened, whilst the patient knows that his case has been well and carefully reviewed. After investigating each organ of the body with all the minuteness and care which modern science can suggest, Dr. Allbutt seems to have a happy knack of throwing on one side all the technical minutiæ of the case, and of estimating the patient's chances without regard to details. He believes it to be the duty of a consultant to give to the patient's friends a *definite* opinion on the case, even if he risks being sometimes wrong, or if he is obliged to say in all honesty that he does not know what is the matter. An old practitioner in the district has recently told us how much he has envied the tact and sympathy with which these opinions have been given, and their effects softened.

Another of Dr. Allbutt's strong points is his keen appreciation of the surgical side

of medical work, and to this, perhaps, is due in some measure the cordial relations he has always maintained with his surgical as well as his medical colleagues. His work on "Scrofulous Neck," in conjunction with Mr. Teale's "Lecture on the Surgery of Scrofulous Glands," has been alluded to before. As another illustration may be mentioned the fact that in his earlier days of practice, Dr. Allbutt got up thoroughly the use of the ophthalmoscope, at his friend's (Mr. Pridgin Teale's) eye clinique, which made him an authority on the nature of affections of the deeper structures of the eye and their bearing on general disease.

As an illustration of the great esteem in which Dr. Allbutt's wide knowledge of medicine is held by his professional brethren, it may be stated that he has been asked to read the Address in Medicine at the meeting of the British Medical Association at Glasgow, in August, 1888. Such an invitation is always felt to confer great distinction, and its importance is increased on the present occasion by the especially high standard of the profession in the city in which the address is to be delivered.

Dr. Clifford Allbutt is a Fellow of the Royal College of Physicians. He was elected a Fellow of the Royal Society in 1880, and of the Athenæum Club a few years previously, and he is a fellow of the Linnæan Society, and of the Society of Antiquaries. He retired early in 1885 from the duties of Physician to the Leeds Infirmary, after twenty years' service, and was elected Consulting Physician to that institution. He is also an acting Magistrate of the West Riding of Yorkshire.

BIBLIOGRAPHY.

Dr. Clifford Allbutt's writings, of which a number are incidentally alluded to above, have been scattered so widely through various Journals and Transactions during the last twenty years, that it is difficult to give any complete list of them. For the most part they are concerned with three classes of subject: (1) on affections of the nervous system, these being the most numerous and covering most ground; (2) on affections of the heart and lungs; (3) on the surgical aids to medicine.

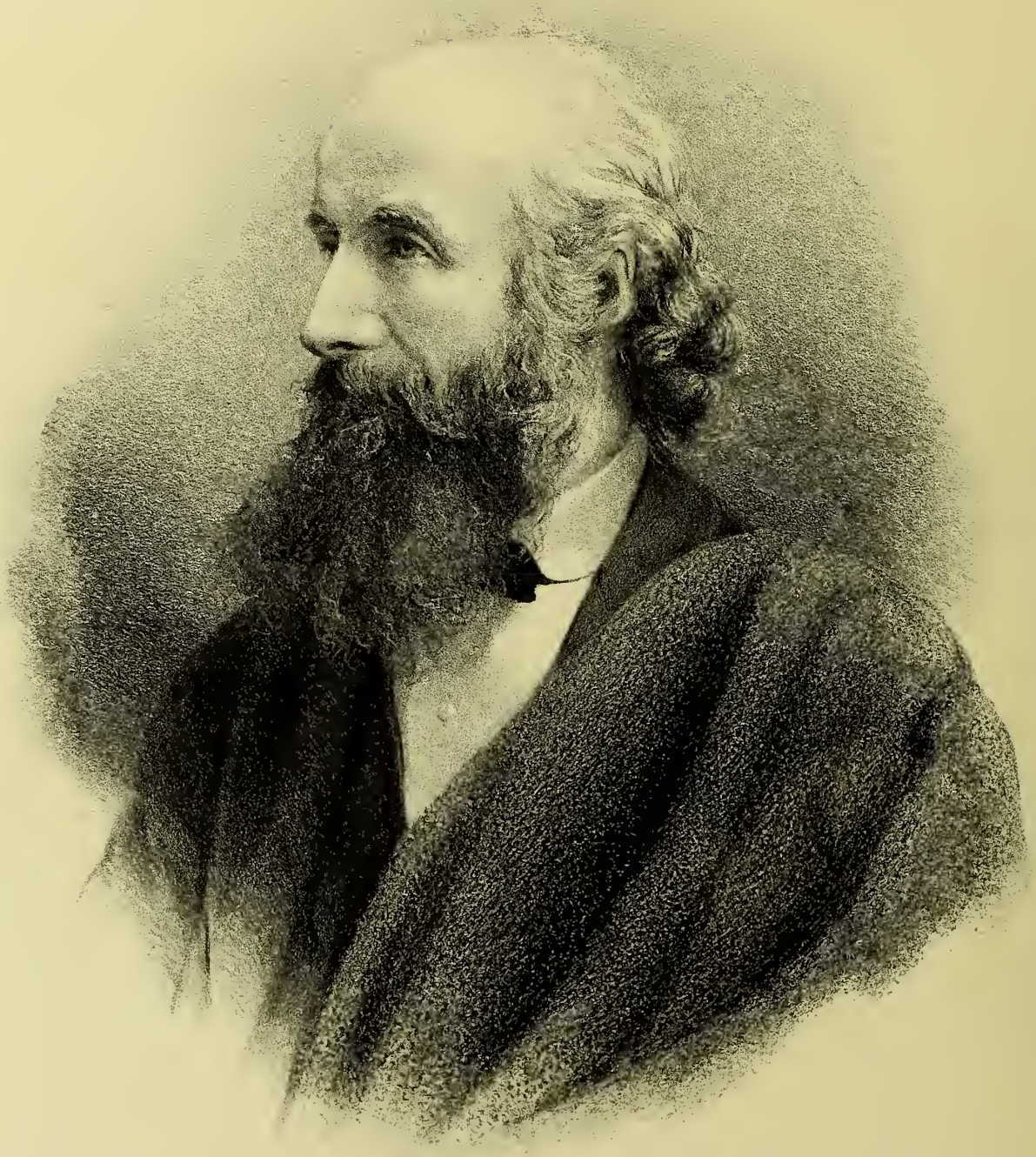
Of papers on nervous diseases, the most original are the "Investigation into the Morbid Anatomy of Hydrophobia and Tetanus" in the *Pathological Transactions* (1871), the first description of "Generalized Encephalic Arteritis in Syphilis" (St. George's Hospital *Reports*), and a series of papers on the "Use of the Ophthalmoscope in Nervous Diseases." These latter observations were included in his treatise on "Medical Ophthalmoscopy" (Macmillan, 1871). Other papers which attracted attention at the time of their publication were, "On Cerebral Syphilis," in St. George's Hospital *Reports* and elsewhere; "Record of First Case of Charcot's Joint Disease recorded in England" (S. George's Hospital *Reports*); many papers "On Medical Electricity;" "On Mental Anxiety as a cause of Granular Kidney;" "On Phthisis as a Neurosis" (*Medical Times*, November 10th, 1871); "On Brain Forcing"—a brilliant paper (*Brain*, April, 1871); "On Menière's Disease;" "On Functional Hemiplegia;" "On Locomotor Ataxy;" "On Migraine;" and so forth—papers which the author believes to have been, in a great measure, superseded by more recent work.

In the direction of diseases of the chest Dr. Allbutt's chief work was undoubtedly the papers on "The Mechanical Causes of Heart Diseases" (*Medical Times*, May 20th, 1871; and St. George's Hospital *Reports*, 1871). These papers were translated into German by Dr. Seitz, of Zurich, in 1874. "On Cardiac Delirium" (*Provincial Medical Journal*, July, 1885). "On Paracentesis Pericardii" (*Medical Times*, November 3rd, 1866; *Lancet*, June 12th, 1869; and *British Medical Journal*, July 9th, 1870). Many papers on "Paracentesis Thoracis," finally summed up in the article on "Diseases of Pleura" in Quain's "Dictionary," and a series of papers on "Davos, as a Resort for Phthisical Patients" (*Lancet*, October 20th, 1877, June 8th, 1878, and July 26th, 1879; and *British Medical Journal*, August 26th, 1879) which drew attention to this means of cure.

Of papers relating to the surgical aids to medicine, we have referred already to those on tapping the pleura and pericardium. This subject was dealt with (*British Medical Journal*, July 8th, 1878), and at greater length in an address on the opening of the Midland Medical Society, at Birmingham, and published (*British Medical Journal*, January 7th, 1882). His last publication in this department was on "Scrofulous Neck," in conjunction with Mr. Teale (Churchill, 1885).

Of other papers the principal are upon "Typhus," "Typhoid," and "Scarlet Fever" (St. George's Hospital *Reports*), 1867; *Transactions* of the Epidemiological Society, 1869; *British Medical Journal*, March 26th, 1870; September 1871; *Lancet*, November 7th, 1874; and so on). "On Obstruction of the Bowels" (*British Medical Journal*, January 11th, 1879). Papers on "Skin Diseases" in the later volumes of the *British and Foreign Medical and Chirurgical Review; Medical Examiner*, Jan. 13th, 1876, and so forth. "On Hyper-pyrexia" (*Lancet*, December 23, 1871). "On Auscultation of the Œsophagus" (*British Medical Journal*, October 2nd, 1875). "On Dilatation of the Stomach," and "Treatment by washing out" (*British Medical Journal*, February 28th, 1886). "On Uræmic Asthma" (*British Medical Journal*, September 23rd, 1877). "On Skin Affections" (St. George's Hospital *Reports*, 1867, and elsewhere). Among many papers on Clinical Thermometery, etc., etc., are, "On the Normal Temperatures of the Human Body" (*Proceedings* Royal Society, p. 126, 1871; *Journal of Anatomy and Physiology*, vol. vii.; and *Alpine Journal*, May, 1871).

Finally, the recent Gulstonian Lectures on "Neuroses of the Viscera," read at the College of Physicians, 1884, which excited keen interest, and were republished by Messrs. Churchill in the same year. To the many short lectures and reports of cases, published in the medical journals by Dr. Allbutt or his assistants, from the practice of the Leeds Infirmary, it is impossible to make any detailed reference.



Yours very truly
John Bedstow

JOHN BEDDOE,

B.A., M.D., F.R.C.P., F.R.S.

DR. JOHN BEDDOE, the distinguished anthropologist, is descended from a family settled for many generations at Withypool, in the parish of Cleobury Mortimer, Salop, and was born at Bewdley, on September 21st, 1826. The Shropshire family of Beddoes—to which belonged the celebrated Dr. Thomas Beddoes, one of the fathers of chemistry (who, like the subject of this memoir, practised medicine at Clifton), and his son, Thomas Lovell Beddoes, the poet—is believed to have had the same origin. Dr. Beddoe's father, Mr. John Beddoe, J.P., was a merchant, whose uncle, Dr. Edward Woodyatt, a physician at Worcester, was father-in-law, and local predecessor, of the late Sir Charles Hastings. Dr. Beddoe's mother was Emma, daughter of Mr. Henry Barrar Childe, of Northwoods, a small property in the neighbourhood of Bewdley ; and he was the second of eight children, of whom seven grew up.

Young Beddoe passed a sickly childhood, but his parents treated him wisely. He was never taught to read or to write (arts which, however, he contrived to pick up clandestinely), but spent most of his time in rambles in the Forest of Wyre, and other parts of that beautiful neighbourhood, where he acquired some taste for natural history. At about ten years of age he was sent to a small school, and later to Bridgnorth Grammar School, then flourishing under the Rev. Thomas Rowley, D.D. His health continuing indifferent, he never passed a continuous year of tuition there, but nevertheless he attained the headship of the school, and was beginning to think of Oxford, when, in his eighteenth year, an attack of typhoid (his second), followed after an interval of some months by acute dysentery, rendered him physically incapable of pursuing his studies. It was long before he recovered sufficiently to apply himself to anything ; but at length he began to study the law, with a view to chamber practice as a barrister. In the course of a year, however, his health broke down again, and he spent nearly two years more in enforced idleness, but rambling often in the mountainous parts of the North of England, and occupying himself with natural science as a pastime, and publishing articles occasionally. He was twenty-two years of age when he happened to see some of his remarks on the chemistry of food referred to in the *Lancet*, by Dr. Robertson, of Buxton, as those of " Dr. Beddoe, of Bewdley." In this singular way it was first suggested to him to study medicine, and he forthwith

(October, 1848), entered himself at University College, London, as a medical student. He was particulary fortunate in his contemporaries, among whom were Joseph Lister, W. Roberts, Wilson Fox, and George Buchanan. With Roberts and Buchanan he diversified medical study by going in for and taking the B.A. degree of the University of London, in 1851.

Mr. Beddoe next proceeded to Edinburgh, where, at the Royal Infirmary, Lister was again among his colleagues, as were also David Christison, John Kirk, and J. D. Maclaren, all of whom obtained appointments in the Civil Medical Service at the same time as himself. Mr. Beddoe took the degree of Doctor of Medicine in 1853, his graduation thesis being on "The Geography of Phthisis."

While in Edinburgh he made expeditions into some of the remoter parts of Scotland, such as Orkney, Shetland, and Galloway, and there obtained the materials for his first publication, "Contributions to Scottish Ethnology," published in 1853, an essay wherein the numerical method was first seriously applied to the problems of physical anthropology. The work was based upon observations of the colour of the hair and eyes of more than five thousand Scotchmen. The author had been perplexed and annoyed, in the course of his reading, to find what differences existed between the descriptions given by authors of the physical characteristics of different races of men, and he determined to put to the test of statistics the different statements and theories about the complexion of the Celts. He did not, indeed, at that time, attribute much importance to such particulars as the colour of the hair and eye, but simply noted them because they seemed very easy of observation, and easy, too, of reduction to statistical order. The task proved much more difficult than he had supposed, and he has devoted a great part of his leisure to it ever since. Again, in the year 1854, he contributed to the *Proceedings* of the Society of Scottish Antiquaries a paper on "The Ethnology of Scotland."

At the time of the Crimean war, along with his fellow-students, Christison, Kirk, and Maclaren, Dr. Beddoe was placed on the staff of the Renkioi Hospital, on the Dardanelles, under Dr. Edmund Parkes. This service lasted from May, 1855, till the summer of the next year, and afforded fine opportunities, not only for the study of military medicine, but for that of archæology and ethnology. Dr. Beddoe owed his appointment partly to the recommendation of his teachers, Christison and Simpson, and partly to Sir James Clark, to whom he was already known as a rising ethnologist, and who sympathized with his desire to do scientific as well as practical work in the Levant. He acquired a conversational knowledge of the Turkish language on the spot, and turned it to account, not only in practising among the Turkish and Romaic peasants, but in travelling, whenever a lull in the hospital work allowed, in the neighbouring parts of Asia Minor.

In June, 1855, Dr. Beddoe visited Brusa with his three Edinburgh comrades, ascended Olympus, and observed the effects of the earthquakes which had recently destroyed a great part of the beautiful city, with about two thousand of its inhabitants. A scheme was also put on foot among them for settling a small English colony on land in the valley of the Granicus, but circumstances broke up the party who contemplated it, and all returned home.

In April, 1856, in the course of a short expedition from Smyrna, he was, in a certain sense, the first modern discoverer of the second of the figures mentioned by Herodotus as having been sculptured in Mount Tmolus by order of Sesostris, but which Professor Sayce and other good authorities pronounce to be Hittite. The figure was shown to Dr. Beddoe by some Turkish *zapties* or rural policemen, with whom he had friendly conversation in their own tongue. Unfortunately, he was not aware that no other European had ever seen it, and therefore did not publish the discovery, which was not really utilized until a German traveller saw the figure about twenty years later.

After two or three months spent in England, not finding any congenial employment, Dr. Beddoe went to Holland, travelled in that country and North Germany, and visited the Saterland, a Frisian district in the midst of quaking bogs, between the Ems and the Weser, and where the language approaches English very closely. He made a short stay in Berlin, sitting under Virchow, Romberg, and Graefe, and spent the winter in the hospitals at Vienna under Oppolzer, Skoda, Hebra, and Sigmund, in company with Dr. Mitchell, the archæologist, and Dr. Scott, now of Southampton. Then, after a visit to Pesth, he travelled southwards into northern and central Italy, and returning home, decided on settling down to practise as a physician in Clifton. This was in the summer of 1857. In 1858 he married Agnes Montgomerie, eldest daughter of the Rev. Alexander Christison, Established minister of Foulden, Berwickshire, and twin brother of Sir Robert Christison, by whom he has a son and a daughter. The name of Mrs. Beddoe will be remembered in connection with several philanthropic movements.

Since that time Dr. Beddoe has continued to practise as a physician in Clifton, and has held several medical appointments, including the Physicianship to the Bristol Royal Infirmary (1862-73) and the Consulting Physicianship to the Bristol Children's Hospital and the Bristol Dispensary.

Beyond the publication of occasional cases, he has written little of purely medical literature, although he has devoted much labour to the subjects of mortality statistics and medical geography. His thesis at graduation, alluded to above, on the "Geography of Phthisis," was among those selected to compete for a gold medal, but did not obtain that distinction. Being dissatisfied with supposed imperfection, Dr.

Beddoe did not publish it. His "Comparison of Mortality in England and Australia" attracted much attention at the Antipodes. The comparative exemption from consumption in Victoria, which he was the first clearly to demonstrate, has since, unfortunately, ceased to be noticeable. Dietetic chemistry continued to be an attractive subject to him, and in his paper on "Hospital Dietaries" he has laid down something like a scientific basis for their construction.

Meanwhile Dr. Beddoe continued to prosecute—during his intervals of leisure, which were usually spent in travel—inquiries into the physical characteristics of different races of men. The subject of hair and eye colour he had made very much his own, and came to be recognized as the leading authority on the question. The stature and bulk of man, and the form and size of the head in different races, were also among his fields of labour. His first publications, on the physical characteristics of various races, named in the appended bibliography, attracted the attention of Dr. Joseph Barnard Davis, who was then publishing, in concert with Dr. Thurnam, his great national work, the "Crania Britannica." The two became fast friends and allies, and for many years assisted each other in anthropological work, occasionally making scientific excursions in company. Some of these journeys were in Ireland, where they were joined by Dr. T. A. Wise, F.S.A., author of "Paganism in Scotland," and Mr. T. Windele, of Cork, who wrote the antiquarian and historical part of the Halls' book on Ireland. Dr. Beddoe's close friendship with Barnard Davis continued till the death of that well-known anthropologist in 1881. He was also privileged to enjoy the friendship of the illustrious Paul Broca, by whom he was invited more than once to Paris—a man whose singularly amiable and genial character had almost as much to do with his eminence as the leader of a school of anthropology as had his transcendent ability. He was likewise on intimate terms with Pruner Bey, and has since enjoyed the friendship of Topinard and Vanderkindere, in whose labours he has, to a certain extent, partaken.

Dr. Beddoe joined the Ethnological Society soon after his final settlement in England, and contributed papers to its *Transactions;* and, soon after Dr. James Hunt, in 1863, had founded the Anthropological Society, he became a member of it also, and was thenceforward almost always on the Council of both these bodies, though working chiefly for the younger and more active of them. Soon afterwards he became a Foreign Associate (honorary) of the Anthropological Society of Paris; and on the successive formation of Anthropological Societies in Berlin, Brussels, and Washington, he has been placed on their honorary lists.

In 1864 a public-spirited Welshman, the late Judge Arthur Johnes, of Garthmyl, offered to the Welsh National Eisteddfod a prize of one hundred guineas for the best essay on the "Origin of the English Nation." This was afterwards supplemented by

a promise of fifty guineas more from the funds of the Eisteddfod Committee. The prize was competed for, without success, during four successive years, by numerous candidates, two at least of whom, Mr. L. Owen Pike and Dr. T. Nicholas, published their essays ; that of Mr. Pike being a performance of real merit.

In 1868 Dr. Beddoe sent in an essay to the late Lord Strangford, the arbiter, and to it the prize was adjudged. It did not, however, appear to the author ripe for publication, and he preferred to continue adding to his material. Meanwhile an action was brought by Mr. Pike against Dr. Nicholas for literary piracy in plagiarism from his book. Dr. Beddoe was called as a witness by the plaintiff, and the case went through more than one court of law with varying success.

Early in 1869, he became President of the Anthropological Society, in succession to Dr. Hunt. The British Association met that year at Exeter, where, on the suggestion of Dr. Hunt, he convened a meeting of anthropologists, in order to devise terms of union between the Fellows of the two rival societies, in order to better the position of the science in the British Association. Dr. James Hunt was taken seriously ill while at Exeter, and died within a few days, and Dr. Beddoe devoted his presidential address in the next year mainly to an *éloge* of the deceased gentleman.

In 1870, also, Dr. Beddoe brought out the largest work he had hitherto attempted, that "On the Stature and Bulk of Man in the British Isles." This was based on about three hundred reports, collected from as many medical men and other friends of biological science, scattered through the country, many of whom devoted much time and pains to the collection of the data. The object of the work was to furnish some trustworthy features towards the composition of a picture of the *physique* of the British population in its several races and districts, before those races, through the greatly increased facilities for cross-breeding, should be so amalgamated as to lose all sharpness of distinction. It also aimed at gathering evidence as to the respective or relative potency in influencing human stature, of race, and of what the French call *media ;* as to the degree, that is, in which hereditary influence can overcome, or is overcome or modified by, such agencies as climate, soil, occupation, and food.

The results obtained from the inquiry were certainly important, both from the ethnological and practical points of view. The average stature of an adult Englishman Dr. Beddoe finds to lie, without doubt, between 5 feet 6 inches and 5 feet 7 inches, but probably nearer to the higher figure ; that of Scotchmen is proved to be greater, perhaps as high as 5 feet $7\frac{1}{2}$ inches, though this is admitted to be little more than a guess ; and the average for Ireland is much the same as that for England. In naked weight the Irishman may be estimated at about 138 lbs. ; the Englishman, perhaps, at 145 lbs. ; and the Scotchman at something like 10 lbs. more. "Roughly speaking," says Dr. Beddoe, "the natives of Scotland, and of the north

and north-east of England, exceed in stature those of Wales, and of the south and west of England; the most notable exceptions to this rule being, in the northern division, the people of certain large towns and some of the Hebrides; and in the southern, those of Cornwall and of the Scilly Islands." The Scotch Highlanders are proved to be a tall and stalwart race (about 5 feet 8.12 inches, and 153½ lbs. naked), and the Lowlanders have great advantages in these respects, being a fine, tall race, those in Upper Galloway averaging in height as much as 5 feet 10½ inches. The Borderers and North Countrymen on the English side have an unequivocal advantage over the rest of Englishmen, in Northumberland, Cumberland, Westmoreland, and Yorkshire, where the unmixed and undwindled breed in the hills and valleys of the east, north, and north-west rise to about the same level as the peasantry of Scotland, two of the returns giving the tallest and heaviest of the English averages. But here in districts, as in Scotland and elsewhere, the town populations materially reduce the average. The Danish counties of the north-midland region, excluding manufacturing towns, give a high stature, as do some districts of Norfolk; but in the southern parts of Cambridgeshire and the south-midland counties generally, we find a decidedly undersized population, the natives of Harpenden giving averages of 5 feet 5.4 inches, and 137 lbs. "The military, lunatic, and criminal returns all agree in placing the native Londoner very low in the scale of stature." Worcestershire stands well; Salop yields averages resembling those of North Wales; the Welsh population is generally of short stature, with bulk more than proportionate; Kent has a good average, but "the general position of the south and south-east of England is rather low in the scale." In the west of England, Gloucester has an average of 5 feet 6.3 inches, and 140.6 lbs., and Somerset and Devon somewhat less. "Finally, the Cornish evidently merit the reputation which they have enjoyed for centuries of being a tall and stalwart race."

Having summarized these particulars at length from his extensive tables, Dr. Beddoe proceeds to discuss the question whether race or *media* had the greater influence in determining the average size of the British people. Race is certainly not silent in the difference in stature and bulk of men from various districts; but the subject, which is treated with great acumen, is beset with difficulties. Far more important, probably, is the influence of the *media*. "It may be taken as proved," says Dr. Beddoe, "that the stature of men in the large towns of Britain is lowered considerably below the standard of the nation, and as probable that such degradation is progressive." He proceeds to treat learnedly the effects of food and other influences in determining physical characteristics, and concludes: "I do not wish it to be supposed that I place a high value on superiority of stature as an individual advantage. . . . . But if we examine only a single race or reputed race at a time, we shall

find, I believe, that wherever that race attains its maximum of physical development, it rises higher in energy and moral vigour. . . . . I have shown that Scotland in general, Northumberland, Cumberland, parts of Yorkshire, etc., and Cornwall are the portions of Great Britain which produce the finest and largest men. I think it will be acknowledged that they also yield more than their share of ability and energy for the national benefit." An admirable review of this book will be found in *The Journal of Mental Science*, of January, 1871.

In 1870 the British Association met at Liverpool, renewed efforts being made to amend the position of the anthropologists, and Dr. Beddoe was placed on the Council as a sort of concession to them. Professor Huxley, who was President that year, was also President of the Ethnological Society, and he now made overtures to Dr. Beddoe with a view to the union of this with the Anthropological Society. Delegates were appointed on both sides, and negotiations carried on. Meanwhile Dr. Beddoe's term of office came to an end, and the union was consummated under his successor, Dr. Charnock. Thus was formed the Anthropological Institute (so designated on the suggestion of Professor Huxley) of which Sir John Lubbock was the first President.

In that year (1871) the meeting of the British Association took place at Edinburgh. A resolution, drawn up by Dr. Beddoe, and supported by Professors Allen Thomson and Turner, and by Dr. Lankester, was carried through all its stages, to the effect "That in future the division of the section of biology into the three departments of anatomy and physiology, anthropology, and zoology and botany, should be recognized in the programme of the Association meetings." Thus was terminated, to general satisfaction, the strife of the anthropologists for recognition in the organization of the Association.

In 1873 Dr. Beddoe was elected a Fellow of the Royal Society, his sponsors being Darwin, Farr, Jenner, Parkes, John Evans, and Barnard Davis; and was admitted to the Fellowship of the College of Physicians. In the same year he presided over the Department of Anthropology, at the Bradford meeting of the British Association.

For some years after this he did hardly any scientific work, as, though he had resigned his infirmary appointment, the labour of medical practice had become very heavy. His autumnal holiday was usually spent in the Scottish Highlands, in the pleasant and profitable fellowship of Sir Robert Christison, who, in 1878, allowed Dr. Beddoe to become the exponent of his views "On the Action and Uses of Alcohol," in a paper of their joint composition.

In 1880 Dr. Beddoe served as President of the Public Health Section of the Social Science Association, at its Edinburgh meeting; and, in 1884, filled the presidency of the Bristol Naturalists' Society.

In the winter of 1884 he at last succeeded in bringing together his accumulations of statistical and other material, including the matter that had been utilized for the Eisteddfod prize essay, and in condensing the whole into a single volume, for publication under the title of "The Races of Britain." The labour was very considerable, and when it was ready for press, Dr. Beddoe was able to seek relief and change in a voyage round the world, including a long visit to the back settlements of Queensland, and a short one to the now sadly disfigured scenery of the New Zealand wonderland. He returned in January, 1886, and has again settled down to practise in Clifton.

The treatise on "The Races of Britain" is one which will interest all who desire to obtain information as to the racial origin of the men and women by whom they are surrounded. The author regards the colour of the hair and eyes as very permanent, believing that it varies little in the same family or tribe. There are difficulties, as he says, in estimating the accuracy of the descriptions of different observers, each of whom sets up the standard to which he has been accustomed. Thus, French anthropologists tell us that the prevailing complexion of the people of the north of France is blonde, while most Englishmen would describe it as dark. Dr. Beddoe naturally regrets the great want of craniological measurements of mediæval Englishmen, and deplores the wanton destruction by the late Dean McNeile of a fine ossuary at Ripon, unmeasured and undescribed. Such collections now remain only at Hythe, Rothwell, and Micheldean. Nevertheless, Dr. Beddoe's great research has enabled him to come to certain conclusions. The palæolithic people, whom Boyd Dawkins maintains to be the ancestors or relatives of the Esquimaux, may, he thinks, be represented in some degree by the modern population of Wales, and the west of England, with the partially Mongoloid character of the oblique eye. The Belgæ, he concludes, were a Celtic speaking, and, to some extent, a Celtic or Celtiberian people in Asia, Gaul, and Britain, the Galatians being their Asiatic representatives. "The Roman occupation," says Dr. Beddoe, "affected our ethnological character very slightly, but the Saxon settlement," which he treats in local detail, "had a lasting influence in the formation of our racial individuality, being something modified by the Danish and Norman waves that followed." "The work of Dr. Beddoe," said Topinard in the *Revue Anthropologique*, in a highly favourable notice of this treatise, "is one of those which the scientific worker loves, and which are of the greatest service to him. I place it in the rank of those original works to which one resorts directly, such as the 'Homme Americain,' of D'Orbigny; the publications of the Novara expedition; the anthropological Statistics of the American war of Secession, the 'Anthropométrie,' of Quetelet; the great statistics of Virchow on colour, the craniometrica work of Broca, &c. The American Statistics and those of Virchow are, however, collective works patronized by

the respective governments, while the work of Beddoe is like that of Broca, altogether personal. Dr. Beddoe commenced it thirty years ago, and has incessantly pursued it ever since, with a perseverance without any other example, in the annual hours of leisure, which his practice has left to him."

BIBLIOGRAPHY.

"Contributions to Scottish Ethnology," Edinburgh, 1853.

"Physical Character of the Jews," 1861 (Reprinted from the *Ethnological Transactions*, 1861).

"On the Stature and Bulk of Man in the British Isles," London, 1870 (Reprinted from the *Memoirs* of the Anthropological Society of London, iii.)

"The Races of Britain; a Contribution to the Anthropology of Western Europe," London and Bristol, 1885.

Dr. Beddoe is also joint-author of the "Notes and Queries on Anthropology" of the British Association for the Advancement of Science, 1874.

Selected Contributions.

Proceedings of the Society of Scottish Antiquaries: "Ethnology of Scotland," 1854.

Transactions of the British Association: "The Physical Characteristics of the Ancient and Modern Germans," 1857; "Anthropology of Yorkshire" (Presidential Address) 1873.

Transactions of the Association for the Promotion of Social Science: "On the Rapid Increase of Town Populations," 1857; "On the Healthiness of the Anglo-Saxon Race in Australia," 1859; "The Industrial Schools Act in Bristol," 1860; "On the Physical Degeneration of Town Populations," 1861; "Dietary of Children in Workhouses;" "On Health" (Presidential Address), 1880.

Transactions of the Ethnological Society: "Physical Characters of the Inhabitants of Parts of Italy and of the Austrian Dominions," 1859.

Memoirs of the Anthropological Society: "Testimony of Local Phenomena in the West of England to the Permanence of Anthropological Types," ii. (1865-6); "On the Head-Forms of the West of England," *ibid.;* "On the Physical Characters of the Inhabitants of Bretagne," iii. (1867-8-9); "On the Head-Forms of the Danes," *ibid.*

Anthropological Review: "Presidential Address on the Death of James Hunt," viii. (1870); "Anthropology of Lancashire," *ibid.*

Journal of Anthropology: "The Kelts of Ireland," October, 1870.

Journal of the Anthropological Institute: "Aborigines of Central Queensland," 1877; "The Bulgarians," 1879; "Anthropological Colour Phenomena in Belgium and elsewhere," 1881; "English Surnames," 1882; "Stature of the Inhabitants of Hungary," 1882.

Bulletins de la Société d'Anthropologie: "Sur la Couleur des Cheveux et des Yeux en France," 1882.

Bulletins de la Société des Sciences Naturelles de Neufchatel: "Sur la Couleur des Yeux et des Cheveux en Suisse," xiii. (1883).

Transactions of the Bristol and Gloucestershire Archæological Society: "Skeletons found at Gloucester," "Skulls of the Ossuary at Micheldean," vi.

Proceedings of the Somerset Archæological Society: "Ethnology of Somerset," 1873.

The Manx Note Book: "Physical Anthropology of the Isle of Man," 1887.

British Medical Journal: "Relations of Complexion, Temperament and Disease."

Dublin Quarterly Journal of Medical Science: "Hospital Dietaries," 1865.

Bristol Royal Infirmary Reports: "Progress of Public Health" (Presidential Address), 1878-9.

Edinburgh Medical Journal: "Comparison of Mortality in Australia and England," 1859.

Medical Times and Gazette: "Action and Uses of Alcohol" (with Sir R. Christison), 1878.

Quain's "Medical Dictionary:" "On Mortality."

EDWARD BELLAMY,

F.R.C.S.

MR. EDWARD BELLAMY is a native of Dorsetshire, having been born at Blandford St. Mary's in that county—where his father, the late Rev. Richard Bellamy, was rector—in the year 1842. He began his education at the Clapham Grammar School, where he was under the Rev. C. Pritchard, D.D., Fellow of the Royal Society, and, at the present time, Savilian Professor of Astronomy at Oxford. He was subsequently sent to King's College School, where, being intended for Woolwich, for an appointment in the Royal Engineers, he entered the Department of Applied Science. Whilst at the College Mr. Bellamy displayed both mental and physical energy. His fondness for manly and athletic sports brought him the robust vigour and muscular development which secured for him a place in his college boat, and in the eleven. He evinced an aptitude for music, finding time to devote to the study of the "science of sweet sound," gaining for himself thereby a source of intellectual enjoyment and recreation, whose advantages it is difficult to over estimate. His athletic and musical learning did not, however, militate against his progress in other directions; on the contrary, there was a *utile cum dulci* combination of a most desirable sort. Natural ability and praiseworthy assiduity enabled him to obtain honours in mathematics, natural philosophy, chemistry, and draughtsmanship, as well as for dexterity in the workshops. As with so many medical men, his knowledge of the use of the pencil has been of the utmost service in his subsequent career. Mr. Bellamy's inclinations leaned more towards the arts of peace than of war, and, finding surgery more to his taste than soldiering, he entered, in 1861, the Medical Department of King's College, and was made Prosector to the late Professor Partridge, in his second year, and, in the following year, became Assistant Demonstrator of Anatomy. His Membership of the Royal College of Surgeons dates from 1863, and he took the Fellowship of the same body, by examination, in 1867. He was early elected Surgical Registrar of King's College, and had, naturally, hopes of joining the staff of his *Alma Mater*. This, however, did not come about, a disappointment to many King's College men of his time; and, in 1867, Mr. Bellamy accepted the Demonstratorship of Anatomy at the Charing Cross Hospital, giving new life to the Medical School there, and before long he got together a large private class for that subject. Then followed an Assistant Surgeoncy and teachership of Operative

Surgery, and in due time the Chair of Anatomy, and a full Surgeoncy. Mr. Bellamy was also surgeon to the St. George's and St. James' Dispensary, and to the Royal Infirmary for Women and Children in the Waterloo road. In 1880 he was elected a Fellow of King's College, an honour conferred only upon old students who have distinguished themselves in any profession they may have entered upon. Mr. Bellamy has lately served as a Member of the Board of Examiners in the Royal College of Surgeons of England ; is Professor of Artistic Anatomy and Examiner in the same subject in the Science and Art Department at South Kensington, where his talent as an artist is of great value ; and he has been recently elected Examiner in Surgery in the Victoria University (Owens College), Manchester. Mr. Bellamy is also a Member of the Council of the Royal Medical and Chirurgical Society, and he has served on the Council of the Pathological and Clinical Societies.

His contributions to literature have been very numerous and valuable. We may instance his articles on Surgical and Anatomical subjects, in Quain's "Dictionary of Medicine" and Heath's "Dictionary of Surgery;" and his well-known and standard works, "The Student's Guide to Surgical Anatomy," which has gone through three editions, almost all the illustrations being drawn on the wood from nature by the author, and his translation of Braune's "Topographical Anatomy from Plane Sections of Frozen Bodies." To Mr. Bellamy is due the credit of having introduced to the English student the subject of Topographical Anatomy, as taught by physical section. The matter had been greatly neglected in this country, and before Mr. Bellamy's translation of Braune appeared, there was little information on the subject available in the English language, excepting in his own small volume of Surgical Anatomy.

Mr. Bellamy's *forte* is operating, and having been an old pupil of the late Sir William Fergusson, he has imbibed much of the style of that distinguished man in tone and touch, rapidity and decision. Very many of his cases are scattered through the hospital reports of the leading medical journals. A bibliography of his principal writings is given below, but others will be found in the *British Medical Journal*, *Medical Record*, *Medical Examiner*, *Journal of Anatomy and Physiology*, etc.

Mr. Bellamy is an excellent clinical teacher, and a most fluent lecturer.

BIBLIOGRAPHY.

"The Student's Guide to Surgical Anatomy." Third edition, 1885.

"Topographical Anatomy from Plane Sections of Frozen Bodies." Translated and edited from the German of Professor Braune. 1887.

SELECTED CONTRIBUTIONS.

Transactions of the Royal Medical and Chirurgical Society: "On the Removal of a Tumour from the Roots of the Brachial Plexus." (In conjunction with Dr. Mitchell Bruce). 1886.

Transactions of the Pathological Society: "On the Removal of a large Fibroid Growth from the Tendon of the *Transversalis Abdominis*," xxi.; "Excision of Bony Growth from Clitoris," *ibid.*; "Report on Cases of Ovarian Disease," *ibid.*; "On the Parts after Excision of the Astragalus," xxiv.

Transactions of the Clinical Society: "On a rare form of Intestinal Obstruction due to the Invagination of a portion of the Ileum in the Walls of the Rectum; Laparotomy; Recovery from Operation," xii.; "On a Case of Successful Trephining for Traumatic Epilepsy," xiv.; "Removal of unusually large Calculi from a Sac communicating with the Urethra," xxi.

British and Foreign Medical and Chirurgical Review: "Reports in Surgery," 1875-6-7.

Medical Times and Gazette: "Clinical Lectures on the Fasciæ," 1879.

Lancet: "On Excision of the Scapula," 1880; "A Case of Innominate Aneurysm Successfully Treated by Digital Pressure," 1880; "On an Obscure Case of Femoral Hernia," 1886.

International Encyclopœdia of Surgery: "On Diseases and Injuries of the Lymphatics."

Quain's "Dictionary of Medicine:" "On Diseases and Injuries of the Nose;" "On General and Special Anatomy."

Heath's "Dictionary of Practical Surgery:" "Axilla;" "Axillary Artery;" "Shoulder;" "Scapula."

THOMAS BOND,

M.B.. B.S., F.R.C.S.

THOMAS BOND was born in the year 1841, in the neighbourhood of Taunton, in Somersetshire. The Bonds, of Orchard Portman, of which family he is a member, are an old yeoman race, who have resided for several generations in succession as large tenant farmers in the Vale of Taunton. He received his early education at King Edward the Sixth's Grammar School, at Bridgwater, the Head Mastership at that time being filled by the Rev. Dr. Stantial.

Mr. Bond's father was one of the old school of sporting farmers, and, for many years, kept a pack of harriers. Thus, in early life, the son was imbued with a taste for the hunting-field, and generally for rural pursuits, to which he is still devoted. Indeed, but for an accident, he would have followed the footsteps of his father, and of those who had gone before him. It happened that in 1856 he received an invitation to visit Southampton, from his maternal uncle, Dr. Edwin Hearne, who was practising there ; and this first excursion from home was destined to be the means of shaping his future career. On the day after his arrival, an accident occurred to an excursion train at Bishopstoke Station, whereby several persons lost their lives and many were injured. His uncle, who was surgeon to the railway company, soon proceeded to the spot, and jokingly said to his nephew when he was starting, "Would you like to come?" "Yes, very much indeed!" was the answer. Young Bond that night assisted in several capital operations, holding the limbs while amputation was being performed, and acquitted himself so well that he was allowed to remain in charge of the wounded, in company with the late Dr. Tilbury Fox, who was then a medical student at University College, and happened to be a passenger by the train. This was the commencement of a friendship that was only terminated by the death of Dr. Fox. From that day, Mr. Bond decided to follow the footsteps of his friend, and, after spending months in tending the wounded, he returned home, and set his mind steadily to work for the Matriculation Examination of the University of London. In this way, at the age of sixteen, in the year 1857, he commenced the study of his chosen profession, like so many other men of present note, in the fashion then prevalent, the almost complete disappearance of which is, on many grounds, to be regretted, viz., as an apprentice. He was fortunate in securing this apprenticeship at the hands of his uncle, Dr. Hearne, who was an operating surgeon of considerable distinction. Three years

Yours truly

Thos Bond

later, in 1860, he matriculated at the University of London, and, in 1861, he entered the Medical School attached to King's College Hospital.

His first examination for the M.B. degree at London University was passed with Honours, and he was also fortunate in gaining Sir William Fergusson's prize in Surgery. In 1864 he passed the final examination for the M.B. degree, and obtained a place in the first-class Honour list. In the same year he became a Member of the Royal College of Surgeons. Mr. Bond next obtained the appointments, successively, of Assistant House Surgeon and House Surgeon to King's College Hospital, which posts he held for the usual term of twelve months. He was then appointed Medical Officer to the Carey Street Dispensary, but, on the outbreak, in 1866, of the war between Austria and Prussia, he was offered a Staff appointment in the Prussian army, and, being moved by a desire to see some military surgery, he requested the Managing Committee of the Dispensary to give him leave of absence for three months, or to allow him to resign his appointment at once, on securing an efficient substitute. This they refused to permit on any terms ; but Mr. Bond cut the Gordian knot by starting for the seat of war the same evening, The unexpected termination of the war brought his military career to a speedy conclusion ; but he worked at military surgery in the hospitals of Dresden and Berlin, and, at the close of the war, visited those of Vienna, Pesth, Bucharest, and Constantinople, continuing in the hospitals during the severe epidemic of cholera, which was then devastating Eastern Europe.

On his return to England in the autumn of 1866, Mr. Bond passed the Fellowship Examination of the Royal College of Surgeons, and, in the same year, obtained the degree of Bachelor of Surgery of the University of London. At this latter examination he was awarded the Gold Medal for Surgery. In 1867, he commenced practice in London, and his first appointment was that of Surgeon to the A Division of the Metropolitan Police Force. Later in that year he also gained the public appointment of Surgeon to the Lock Hospital in St. George's Union, Westminster. This latter post he resigned in 1875, when he became Assistant Surgeon to the Westminster Hospital, and Surgeon to the Skin Department at the same school. He also holds at the present time the posts of Lecturer on Forensic Medicine to the Westminster Hospital Medical School, of Consulting Surgeon to the Western Dispensary, and of Surgeon to the Westminster Training School for Nurses. Mr. Bond has had considerable experience in the practice of Forensic Medicine, and has done a great deal of work in that department for the Treasury. His name will doubtless be familiar to most readers as a special witness for the Crown in several notorious criminal cases, notably the Wainwright case, the Richmond murder, and more recently the Lefroy and Lamson cases. The first Forensic case in which he was engaged was that of Dr. Baddely, which is mentioned in Taylor's "Medical Jurisprudence" as being the

first in which a conviction was obtained for attempted abortion by the use of drugs only. Mr. Bond was consulted by the Detective Police (to which force he had been recently appointed Surgeon), relative to a man who was supposed to be doing a large practice in procuring abortion. He, therefore, introduced to the Police an intelligent woman suffering from ovarian tumour, and she, having been provided with money, presented herself to the man, Dr. Baddely, who promised to procure abortion for £5. The medicines he provided were duly submitted to analysis, and it was found that, after giving her colocynth, aloes, iron, gamboge, etc., he had at last supplied the woman with twelve powders of ergot of rye, each containing a drachm. These powders were most of them subsequently used in actual labour cases in the wards of a lying-in infirmary, and were found to be active and efficient in their action on the uterus. The case against Dr. Baddely came on for trial, and the counsel for the defence laughed at the idea of a conviction being obtained. In cross-examination, he triumphantly asked Mr. Bond whether ergot of rye powder was not often inert? To which the latter of course answered "yes." "Then how do you know these powders would have any effect"? "Because I have tried them on parturient women," was the reply. The prisoner was sentenced to seven years' penal servitude.

Since that time, Mr. Bond has been engaged in all the chief medico-legal cases undertaken by the Treasury. The most important of these was the Wainwright case, alluded to above, when he discovered three bullets in the brain of the deceased, which had been overlooked in the first post-mortem examination. He also identified the remains beyond dispute by discovering the scar of a burn on the left leg, which had been forgotten by all the witnesses of identification. When, however, Mr. Bond produced the piece of skin, the witnesses at once identified the mark.

The most complicated case in Mr. Bond's experience was that of Mrs. Thomas, murdered at Richmond by Kate Webster. In this instance, the prisoner had divided the body and disposed of it in various ways; some parts were boiled and thrown into the river Thames, other parts were buried in the garden, others, again, in manure heaps, and some of the limbs were burned in the furnace oven, the charred bones being found in the cinders; but nearly every part of the body was accounted for. This case was singular, also, from the fact that the prisoner, when convicted, pleaded that she was quick with child. The court doors were immediately shut to prevent the matrons, who were listening to the trial, making their escape. A jury of matrons was impanelled, and Mr. Bond was directed to assist them. The result of his examination proved the prisoner's statement to be unfounded. In the Lawson case, Mr. Bond foresaw the grave difficulties to be encountered in proving the crime; he took the precaution of immediately placing the parts he removed for analysis in absolute alcohol, and he insisted on the necessity of employing two independent analysts;

this was at first opposed by the Treasury Solicitor, but he eventually followed Mr. Bond's advice, and the result of the trial showed how important it was.

For some time past Mr. Bond has been much employed also in Railway Compensation cases, and he is officially connected as Consulting Surgeon with two of the most important Railway Lines, viz., the Great Eastern and Great Western Railway Companies. The latter appointment he received in 1882.

Mr. Bond is a Fellow of the Medical Society of London, an Associate of King's College, and a Member of the Pathological Society. He has not hitherto been an extensive writer. His contributions to Medical literature are few, but each has been written on subjects on which he is an authority. The most important ones are a paper in the *Lancet* on the "Contagious Diseases Act," and a contribution, also in the *Lancet*, on "Gonorrhœal Rheumatism," and he was selected to write the article on "Railway Injuries" in Heath's "Dictionary of Surgery."

On the former subject, Mr. Bond has been examined by all the Commissions, and has expressed the opinions which he still holds about the matter, viz, that these diseases have decreased neither in frequency nor intensity, save in such districts as are protected by the Contagious Diseases Act. The seeming improvements to which the adherents of the Anti-Contagious Diseases Act agitation point, Mr. Bond attributes entirely to the improvement which has in later years been brought about in the treatment of those complaints. Mr. Bond is a strong advocate for the extension of the Act to all large towns and military stations.

Mr. Bond is also joint author, with Colonel Pearson and Captain McHardy, of a Report to Her Majesty's Secretary of State for the Home Department, on the Sanitary Condition and Requirements of the Metropolitan Police Stations. This report is one of great practical value, and the thoroughness of initial examination into the existing condition of things, and the very practical nature of the remedies suggested for the correction of defects, reflect the greatest credit upon Mr. Bond and the gentlemen associated with him in the work.

BIBLIOGRAPHY.

"Report on the Sanitary Condition and Requirements of Metropolitan Police Stations, for the use of the Home Office." (with Colonel Pearson and Captain McHardy).

SELECTED CONTRIBUTIONS.

Lancet: "On the Contagious Diseases Act," 1868 and 1870; "Lectures on Gonorrhœal Rheumatism," 1872.
Transactions of the Society of Arts: "Hygiene in Dress."
Westminster Hospital Reports: "Notes on Syphilis."
Heath's "Dictionary of Surgery": "Railway Injuries."

Yours most faithfully
J. Cuthbert Brown

SIR JAMES CRICHTON BROWNE,

M.D., LL.D., L.R.C.S., L.M., F.R.S.

SIR JAMES CRICHTON BROWNE, who was born in Edinburgh in 1840, is the son of the late Dr. W. A. F. Browne, Her Majesty's First Commissioner in Lunacy in Scotland. His youth was passed in Dumfries, where he received his early education, and where, in his father's house, he made the acquaintance of some of his most brilliant and celebrated countrymen, including Sir J. Y. Simpson, who, in 1847, had been the first to lay before the profession the new anæsthetic of chloroform as a substitute for sulphuric ether; Sir R. Christison, the great pharmacologist; Moir, the "Delta" of *Blackwood;* Aird, the writer; Scott-Riddell, the poet; Nichol, the astronomer; Balfour, the botanist, and others. In such company his mind expanded, and it was at home that the beginnings of his great attainments and wide general culture were laid down. From the Dumfries Academy, where he became "dux" of the school, he proceeded to Trinity College, Glenalmond, of which Dr. Wordsworth, now Bishop of St. Andrew's, Dunkeld, and Dunblane, and Dr. Hannah, at present Vicar of Brighton, were in his time successively head-masters.

It was proposed that, after gaining a Snell bursary at Glasgow, he should proceed to Balliol College, Oxford; but this plan was abandoned when he developed a strong predilection for Medicine, from which he was not to be dissuaded, and he was sent to the University of Edinburgh. There he studied first in Arts and then in the Medical Classes; and, while still an undergraduate, attained what has always been regarded as the distinguished position of Senior President of the Royal Medical Society—an ancient body incorporated by Royal Charter, of which Oliver Goldsmith was a member, and which has contributed in no slight degree to the success and celebrity of the Edinburgh Medical School. In the Hall of this Society the most brilliant, able, and industrious of the Edinburgh medical students of many generations past have been in the habit of debating with the junior practitioners of the city, and even sometimes with learned professors, all questions of medical and surgical interest; while, in its Reading Room, Library, and Museum, they have had opportunities of carrying on their work, especially valuable in times when medical students were less carefully shepherded than they are now, and had comparatively few facilities offered them. But it is by bringing the best Edinburgh students of each period into closer intercourse than the meetings of the classes secure, and by laying the foundations of

life-long friendships, that the Royal Medical Society has perhaps done its most useful work. During the years when Sir James Crichton Browne was its central figure, there happened to be gathered together there a group of young men of rare talent, whose friendship was well worth retaining, and whose companionship must have been of an inspiriting and profitable kind. Professors Grainger Stewart, John Young, Alexander Simpson, Crum Brown, Pettigrew, Gamgee, Rutherford, Annandale, Dickson, Cleland Frazer, Drs. John Duncan, Andrew Smart, Cunningham of Edinburgh, Withers Moore of Brighton, Eddison of Leeds, Little of Dublin, Dyce-Duckworth of London, and Bannatyne Finlay, Q.C., M.P., were, with many others who have since risen to eminence, Sir James's contemporaries and friends in the Royal Medical Society. These can readily recall him as a debater, and will not forget his gifts as an orator, which were there early displayed.

Having gained prizes in several classes in the University, he graduated with Honours in 1862, his thesis on "Hallucinations" being highly commended, and, at about the same time, he took the licence of the Royal College of Surgeons, as well as the licence in Midwifery. After studying for a year in London and Paris, and assisting his uncle, Dr. Balfour, in practice at Edinburgh, he yielded, as it were, to hereditary predisposition, and determined to devote himself to that department of practice in which his father had, by his skill and humanity, attained a foremost rank. In pursuance of this resolve—to which he was also, doubtless, in some measure guided by Professor Laycock, with whom he was a favourite pupil—Dr. Crichton Browne sought special experience in the best schools of the day, acting as assistant to Dr. Bucknill in the Devon County Asylum, to Dr. Hitchman in the Derby County Asylum, and to the late Dr. Parsey in the Warwick County Asylum. His first independent charge was at Newcastle-on-Tyne, where, in 1865, he was appointed Medical Superintendent of the newly-constituted Borough Asylum, which he organized with great success, and where he delivered a course of lectures on mental diseases, in connection with the College of Medicine.

He was rapidly promoted to the Medical Superintendentship of the large Lunatic Asylum for the West Riding of Yorkshire, at Wakefield, on the appointment of Mr. Cleaton as a Commissioner in Lunacy, in 1866, and there he laboured assiduously for ten years, and built up his professional reputation. Being an able administrator, he rapidly acquired the confidence of the visiting magistrates and public authorities; as an ardent sanitary reformer, he introduced structural, disciplinary, and dietetic changes into the hospital, which had the effect of greatly reducing the death-rate, and improving the health of the community; as an acute psychologist, he ministered with signal advantage to the mind diseased, and liberally employed all the moral means at his command—his personal influence, interesting occupations, and varied amusements—to promote the

recovery or alleviate the sufferings of the crowds of afflicted beings who were placed under his care ; and, as a devoted lover of his profession, he never failed to keep abreast of every advance in medical science and practice, so that his patients might have the benefit of the most enlightened treatment, while, at the same time, he laboured to make his asylum a home of original inquiry, and to draw around him young men eager for scientific research and work. It was a noteworthy merit in Dr. Crichton Browne that he was always a physician first and an asylum medical officer afterwards, that he never sank the scientist in the house-steward, and that he prided himself, not so much on the excellent discipline, strict order, and artistic decorations of the large establishment under his command, as on its organization as a hospital, and on the contributions which it made to medical science and the healing art. Under Dr. Crichton Browne's superintendence the medical staff of the asylum was largely increased, clinical clerks and a special pathologist being appointed, accurate medical records were provided, a pathological museum was formed, a photographic studio was erected, and a physiological laboratory instituted, in which Ferrier's first series of experiments into the functions of the brain were carried on. An active worker himself, Dr. Crichton Browne was also the cause of work in others, and induced his junior colleagues to engage in investigations, the results of which were published in the "West Riding Asylum Medical Reports," the first English journal devoted to neurology, which he founded and edited as long as his official connection with the West Riding Asylum continued.

The various projects and duties which we have enumerated did not exhaust Dr. Crichton Browne's superabundant energies, for, while director of the West Riding Asylum, he lectured at the Leeds School of Medicine, took part in the discussions of the Leeds Medico-Chirurgical Society, delivered popular lectures in Leeds, Halifax, Bradford, and Wakefield, and organized annual medical conversaziones at the asylum, at which addresses were delivered on subjects cognate to insanity by men like the late Dr. Anstie, Professor Turner, Professor Carpenter, and Dr. Broadbent, and at which the profession in the district met under pleasant and instructive conditions. The fame of the West Riding Asylum grew rapidly under Dr. Crichton Browne's superintendence. Visitors came to it from America and the Continent, its junior medical officers readily obtained promotion in other asylums, and official encomiums on its management were freely bestowed.

Hence it was that no surprise was felt when, on the occasion of a vacancy occurring in the office of Lord Chancellor's Visitor, through the retirement of Dr. Bucknill in 1876, that great prize in lunacy was offered by the then Lord Chancellor, Lord Cairns, to Dr. Crichton Browne. Some regret may, however, be felt that he accepted the offer, and thus resigned the opportunity of carrying out some notable schemes for the improved treatment of the insane, which it was known that he then entertained, and

which must, if put in force, have made the West Riding Asylum the leading school of medical psychology in Europe. We believe we shall be correct in saying that it was only because he felt that his arduous labours at Wakefield were telling on his health that he consented to assume a position of less wearing responsibility than that which he held. On leaving the West Riding, Dr. Crichton Browne was entertained at a banquet, presided over by the late Lord Houghton, and was presented with testimonials by the medical profession of the district, and by the magistrates, and the officers of the asylum.

In London, Dr. Crichton Browne has not confined himself to strictly official routine. He was president of the Medico-Psychological Association in 1878, and, in 1880, he presided over the Medico-Psychological Section of the British Association at its Cambridge meeting. He has contributed largely to medical literature, and was one of the founders, and has been for some time an Editor of *Brain*. In 1879, the honorary degree of LL.D. of the University of St. Andrew's was conferred upon him, and, in 1883, he was elected a Fellow of the Royal Society, being proposed by Darwin, to whom he had rendered valuable assistance in his work on the 'Expression of the Emotions,' as well as in other scientific questions.

Certainly not the least interesting chapter in the 'Book of Health'—that on "Education and the Nervous System"—is from the pen of Sir James Crichton Browne, wherein he shows his great knowledge of the true principles of education. It is, indeed, now beginning to be recognized that the mental training of the young cannot properly be undertaken except by those who have some knowledge of cerebral and physical conditions. As Sir James says, "in a wide sense education and practical medicine have the same aim . . . The methods of the schoolmaster are mainly physical; those of the physician are mainly physical, but he would be a poor physician who ignored the facts of consciousness, and he would be a useless schoolmaster who gave no attention to the working of material forces." Sir James, in this essay, first treats of "Body-growth," and its importance to mental training, and then deals with "Brain-growth," and of education, which affects the cerebral organ in its size, its quality, its elaboration of structure, its balance of parts, its functional habits and its blood supply, upon each of which points he dwells with some minuteness. Periodicity and education are then considered—the diurnal changes, with the phenomena of sleep, and the time of greatest activity, which in children is from 9 a.m. to noon, when their most arduous mental work should be undergone; human changes, speaking whereof the author dwells feelingly upon the changes due to excessive brain-work in competitive and other examinations for women; seasonal changes, wherefrom he deduces the fact that Spring is the time when there should be some relaxation of pressure on the higher nerve-centres of children; and epochal changes, the periodical variations of physical functions. "The value of physical education," he says, "does not now require

to be vindicated. . . . A cunning right hand is one of man's grandest possessions ; and every man, no matter what his rank or fortune, would be mentally improved by learning a handicraft, and every woman should be taught to use her fingers in work of some kind." In speaking of intellectual education, Sir James rightly lays great stress upon the value of the kindergarten system and object-teaching, and he loudly protests against the system of competitive examination. "The competitive examination system necessarily involves cramming, which is special preparation for a special purpose, and has many objectionable aspects. It is destructive of sound education, for it takes up the time which should be devoted to it, and it substitutes for a sober and orderly development of all the faculties a very partial training of one or two powers. It is practically useless as a mental discipline, and even as a mental feeder ; for it may be doubted whether the information acquired during cramming is retained long after the ordeal in which it was intended to be serviceable." After dealing with the baneful physical effects of over-cramming, and the benefits of good home-education, Sir James concludes this admirable chapter with some remarks on the moral training of the young.

It was because of the insight and ability displayed in this essay, that, when the question of 'Over-pressure in Schools'—to which the *Provincial Medical Journal* was amongst the first to direct public attention—came prominently to the front, Mr. Mundella invited Dr. Crichton Browne to make some inquiries into the matter in elementary schools in London. After some hesitation, he undertook the public duty thus thrust upon him, and promptly presented a Report which did not prove agreeable to the Department, and was perhaps therefore expeditiously pigeon-holed. But Mr. Mundella had announced in Parliament the commission which he had entrusted to Dr. Crichton Browne, and the matter was not lost sight of. Owing to the exertions of Lord George Hamilton, Mr. Cecil Raikes, and others, the report was ultimately dragged from concealment, and published as a Parliamentary Paper, when it at once took the country by storm. We venture to say that full justice has not yet been done to that report, notwithstanding the encomiums bestowed upon it. That it should have been produced by one individual in less than three months is sufficiently remarkable—when the collection of the materials from which it is formed, and the preparation of the document itself, might very well have occupied a commission of several persons and a staff of clerks for twelve months—and that it should display such a rare combination of scientific attainments, practical sagacity, and literary accomplishments, is even more striking. On the appearance of the report, an attempt was made by an official clique in London, joined, we regret to say, by some representatives of the profession, to write it down, but it was too powerful an indictment to be disposed of in that way. It has been accepted by teachers, parents, and medical men, and it is now all but universally admitted that Sir James Crichton Browne has done a great public service

by pointing out in an emphatic manner the evils which attend wholesale, hasty, and indiscriminate education. The very department which attempted to suppress the Report has been obliged to adopt many of its recommendations. A strong impulse has been given by it to the provision of penny dinners and the feeding of the children of the poor, and a check has been administered by it to the extravagant demands of School Boards. Great benefits may yet be expected to flow from it, especially if Dr. Browne follow it up, as he seems disposed to do, by further contributions to the literature of over-pressure.

No better proof of the appreciation of Dr. Crichton Browne's efforts to ameliorate the condition of the children of this country could be given than by the numerous nominations made to place him on the London School Board. He has received from the teachers of Great Britain complimentary resolutions substantiating his statements, and thanking him for his outspoken words on their behalf. The executive council of the National Union of Elementary Teachers has also passed a resolution in these terms: "That this executive council, consisting of men practically engaged for years in the work of elementary education, and representing 13,000 elementary teachers in all parts of the country, endorses the general conclusions arrived at in Dr. Crichton Browne's report with regard to over-pressure in schools, and thanks him for the masterly way in which he has presented the facts of the case as known to the teachers, and as established by communications received from teachers, managers, and parents of pupils in all classes of elementary schools in all parts of England and Wales."

Sir James Crichton Browne's large experience in cerebral conditions, has led him to take a great interest in the phenomena of hypnotism, mesmerism, animal magnetism, &c., and in a letter to the *British Medical Journal*, on Dr. Beard's discredited experiments in 1881, he held out a warning as to the dangers of supersensitive states of the brain. "It is well," he said, "that it should be generally understood that hypnotism is not, as is sometimes imagined, a state of mental exaltation in which, or through which, glimpses may be obtained into an unseen universe, but a morbid condition, tending towards mental enfeeblement and nervous degeneration. I can at once recall three cases of insanity that have fallen under my observation, in which the mental derangement was clearly brought on by mesmeric experiments operating upon persons of delicate organization; and I have no doubt that, were I to search my experience, I might bring a much more serious indictment against mesmerism or hypnotism as a cause of disease. My belief is that hypnotism is demoralizing and dangerous to those who practise it, and that the amount of instruction to be derived from it is infinitesimal. It ought never to be resorted to for amusement or the gratification of curiosity, and its employment for scientific purposes should be as guarded and economical as other experiments on living animals. Were it widely recognized that hypnotism is a depraved state of the brain and nervous system,

and that only a small percentage of Englishmen and Englishwomen—and these certainly not the best of their race—are capable of being hypnotized, hysterical girls, effeminate youths, and credulous adults would be less prone to dabble in its tainted mysteries."

In dealing with his afflicted patients, Sir James has had some strange and uncomfortable experiences. On one occasion an old sailor, fancying that his whole family had been poisoned by the doctor, secretly unfastened the straps of his ponderous wooden leg, and, as that gentleman, all unconscious of the suspicion, was passing by, smote him with it on the head with no light hand, as may be believed. At another time, an Irishman, mistaking Sir James for a countryman with whom he had a quarrel, violently assaulted him, and broke one of his ribs. But the doctor, being deeply interested in his subjects, has felt no alarm from the repetition of such dangerous occurrences; and, though no believer in the controlling influence of the eye, of which the "Late Physician" speaks in his "Diary," he knows the advantage of tact and firmness; and his sympathetic nature and swift grasp of the faintest indications of meaning, enable him to exercise an undoubted power over those whose intellects are enfeebled or disordered. It is no difficult thing for him to enter into an alien state of mind, and to grasp the hidden cause of its aberration, and his kindness of heart and practical knowledge have enabled him, in many such cases, to understand and to console those who have come under his charge.

In the year 1886, the well-deserved honour of knighthood was conferred upon Dr. Crichton Browne by Her Majesty, for his distinguished services to science, and his contributions to the social welfare of the nation. As all physicians should be, Sir James is a man of wide general culture, and is not less at home in literary and artistic than in medical circles; he has numbered amongst his intimate friends bygone celebrities such as Thomas Carlyle, Thomas Aird, John Brown, and Lord Houghton; and he is acquainted with many living celebrities, such as Millais, William Black, Woolner, and Bret Harte. He is a Fellow of the Royal Medical and Chirurgical Society, and of the Medical Society of London, a corresponding Fellow of the Academy of Medicine of New York, an Honorary Member and late President of the Medico-Psychological Society, a Fellow of the Royal Physical Society of Edinburgh, and of the Royal Societies of London and Edinburgh, and Lord Chancellor's Visitor in Lunacy.

Sir James Crichton Browne married, in 1865, Emily, the youngest daughter of the late Dr. Halliday, of Seacombe, Cheshire, by whom he has had issue a son, Mr. Harold Crichton Browne, of Magdalen College, Cambridge, and 3rd Battalion Royal Scots Fusiliers; and one daughter, Miss Florence Crichton Browne, who has displayed much talent for sculpture, and has been an exhibitor in London, and at provincial exhibitions.

BIBLIOGRAPHY.

"Manual of Lunatic Hospital Management and Hygiene." (In the press).

SELECTED CONTRIBUTIONS.

West Riding Asylum Reports: "Cranial Injuries and Mental Diseases," 1871-72, etc.

British Medical Journal: "Lectures on Mental and Cerebral Diseases," 1871-72; "The Antagonism of Medicine," 1876.

Brain: "The Weight of the Brain and its Component Parts," 1879, etc.

The Book of Health: "Education and the Nervous System."

Yours Sincerely
Charles A Cameron.

SIR CHARLES ALEXANDER CAMERON,

M.D., M.K.Q.C.P.I., F.R.C.S.I., PH. D., D.P.H. CAMB.

SIR CHARLES CAMERON was born in Dublin on the 16th of July, 1830. He is the only surviving son of Ewen Cameron, by his wife, Belinda, daughter of John Smith, of the County of Cavan. Ewen Cameron served with distinction in the Peninsular War, and in the expedition against the United States in 1812, and was severely wounded eight times. According to McKenzie's "History of the Clan Cameron," second edition, page 415, he was the grandson of the amiable and unfortunate Archibald Cameron (younger brother of the "Gentle Lochiel," chief of the Clan Cameron), who was executed for having taken part in the rising of 1745, in favour of Prince Charles.

Sir Charles received his earlier education in Dublin and Guernsey. His father desired that he should enter the army, but, dying when his son was only fourteen years old, this wish was not realized. Having studied Chemistry under the late Dr. Aldridge, of Dublin, and Pharmaceutical Chemistry under the late Mr. Earl of the same place, Mr. Cameron, was, in 1852, elected "Professor" to the Dublin Chemical Society, which had been founded in that year. There was at the time no popular institution in which Chemistry was taught in Dublin, but this Society in some measure supplied the want, and it continued in existence until 1861, when it expired, there being then in good working order the Royal College of Science for Ireland. Mr. Cameron's lectures in connection with this Society attracted considerable attention, and, before his twenty-third year, he was engaged by several Dublin and provincial institutions to deliver popular lectures on various scientific subjects, which he continued for many years with the greatest success.

Mr. Cameron studied Medicine and Surgery in the School of Medicine of the Apothecaries' Hall, the Dublin School of Medicine, the Original (now Ledwich) School of Medicine, the Meath Hospital, and the Coombe Hospital. In 1854 he went to Germany (where he graduated in Philosophy and Medicine), and there he acquired the friendship of Liebig, to whom he dedicated one of his works, and, to quote the words of his preface, "whose commendation it has been his good fortune to gain." About this time Mr. Cameron was making experiments in agricultural chemistry on a small piece of ground attached to his dwelling, as well as in the laboratory. At the meeting of the British Association in Dublin, in 1857, he read an elaborate paper, proving

that the nitrogen of plants could be wholly derived from urea ; and his assertion as to the assimilability of urea was subsequently verified by Hampe, a German chemist, and, more especially, by George Ville, of Paris. In this year he published his "Chemistry of Agriculture," which attained a large circulation. In 1856 he had been appointed Lecturer on Chemistry and Natural Philosophy to the Dublin School of Medicine, and, on that School becoming extinct in the following year, he succeeded Dr. Maxwell Simpson in the Chemical Lectureship at the Original, now termed the Ledwich, Medical School. Both of these appointments were spontaneously offered to him, doubtless on account of the estimation in which he was held as a lecturer. In 1869 he was also invited to take the Lectureship on Chemistry to the Medical College of Steevens' Hospital, and retained his connection with both schools until 1874.

In 1863 Dr. Cameron was employed by a number of sugar refiners to help them in their agitation for reforming the method of levying the duties on sugar. Hence he was moved to write a pamphlet on sugar, which attracted considerable attention, and is believed to have had some influence in parliamentary circles. From 1858 to 1863 he was editor and part proprietor of the *Agricultural Review*, in which he wrote hundreds of articles on various subjects. In 1860-62, he was also editor of the *Dublin Hospital Gazette*. About this time he was elected a Foreign Member of the New York State Agricultural Society, and of the Royal Agricultural Society of Belgium. In 1862 he contributed a series of papers on the inorganic constituents of plants to the *Chemical News*. He showed that it was impossible to develop a plant without the aid of potassium, whilst sodium could be dispensed with. These papers have been extensively quoted in Continental and American works. In 1863 he was awarded a medal by the Highland and Agricultural Society of Scotland for an essay "On the Uses of Phosphates in Agriculture." For several years Dr. Cameron continued to publish pamphlets and papers relating to Agricultural Chemistry and Vegetable Physiology. In 1868 he wrote the well-known "Stock Feeders' Manual," and he is the author of the articles on "Agricultural Chemistry" in Cassell's "Technical Educator."

In 1862 he was elected Public Analyst for the city of Dublin, the only others appointed up to that time being Dr. Letheby, of London, and Dr. Hill, of Birmingham. The Adulteration Act, under which he was appointed, was very defective, but he, nevertheless, worked it so successfully that, within three years, more than fifty persons were convicted of selling adulterated food in Dublin. This Act, which was the first of the kind, was passed in 1860, and was wholly inoperative in every place save Dublin. After the passing of the Sale of Food and Drugs Act, Dr. Cameron was appointed Public Analyst to no fewer than twenty-three out of thirty-two Irish counties, as well as to the cities of Limerick, Waterford, and Kilkenny, and to several large

towns. For many years he was Expert and Analyst to the Government in criminal cases, but resigned that position five years ago. In 1867 he served on the International Jury of the Great Exhibition in Paris, and in the same year was elected Professor of Hygiene or Political Medicine to the Royal College of Surgeons in Ireland. His lectures were open to the public, and, during many sessions, so well attended were they that people came at two o'clock to secure seats for a lecture which was not to be delivered until two hours later. The first course of lectures was published in 1868, and was dedicated to Baron Liebig. In 1869 Dr. Cameron wrote his "Handybook on Health," chiefly intended for schools. Since 1869 he has regularly contributed reports upon Public Health to the *Dublin Journal of Medical Science*, which are not merely a chronicle of sanitary affairs, many of them being original essays. A large volume of them was published in separate form in 1874, and another volume in 1887.

In 1874 Dr. Cameron published his "Manual of Hygiene and Compendium of the Sanitary Laws," a book which has attained to a large circulation, and is one of the text-books recommended by the University of Cambridge and the Royal University for Ireland to those studying for Sanitary Diplomas. This work has been partly translated into Japanese. Amongst Dr. Cameron's other volumes may be mentioned a "Handy-book on Food and Diet," "Translations of Poems from the German," and "A Guide to the Zoological Gardens, Phœnix Park." He has also edited, and in great part re-written, the last four editions of Johnston's "Agricultural Chemistry and Geology," and has edited the well-known "Catechism of Agricultural Chemistry and Geology," which has recently been translated into Danish and Finnish.

Dr. Cameron's contributions to the medical journals have been numerous. His account of a mental affection which he has termed "Toxiphobia," in the *Dublin Journal of Medical Science*, contains some curious matter. His paper in the same journal on "An Epidemic of Typhoid Fever caused by Infected Milk," will, the *Lancet* states, always be a classic on the subject. It was the first paper of the kind in which the higher mathematics were used in proving that the milk was the cause of the epidemic. In the same journal Dr. Cameron discussed the question as to "The Plurality of Fevers confounded under the general term 'Typhoid.'" He has also published important papers on "The Therapeutic Action of Ferric Iodate," and on "The Physiological and Therapeutical Action of the Iodates and Bromates, especially those of Quinine." The latter, in effervescing form, have been largely used in Dublin during the last six years, with great success in the sluggish forms of pneumonia and in neuralgia.

Dr. Cameron was the first to make the important observation that chlorine is absorbed into the blood, and may be detected in the brain—that it is a cerebral poison.

This observation has been confirmed by Binz, of Bonn, who has extended Cameron's experiments to bromine and iodine, which appear to act similarly to chlorine. Dr. Cameron appears also to have been the first to point out that many colours on wall-papers, other than green, contain arsenic. In 1874 he was elected Professor of Chemistry to the College of Surgeons of Ireland, whereupon he resigned his connection with the Ledwich and Steevens' Hospital Schools, but retained his Professorship of Hygiene. In the same year he became Co-Medical Officer of Health with Dr. Mapother, and, in 1880, Dr. Mapother having virtually retired, he became sole active Medical Officer of Health for Dublin. In 1882 the Corporation of Dublin placed the whole of their Sanitary Department under his direction, increasing his salary to £1000 per annum, and permitting him to retain his numerous other appointments. His administration of the Sanitary affairs of the City has been effective, and has led to the closing, mostly for ever, of nearly two thousand houses unfit for human habitation, while the condition of thousands of other houses has been greatly improved. His Sanitary Reports, and his papers on Hygiene, published in the journals, are numerous and interesting; he has given great attention to the question of the social life of the very poor, and some of his articles on this matter have appeared in lay journals, such as the *Pall Mall Gazette* and *Eastward Ho!* His evidence before the Commission on the Housing of the Poor, 1885, is specially referred to in the Report of the Commission, and he has been quoted largely by M. Raffalovich in his great work "Le Logement de l'Ouvrier et du Pauvre."

In June, 1885, Dr. Cameron received the honour of Knighthood in consideration of "his scientific researches, and his services in the cause of Public Health." In 1885-6 he was President of the Royal College of Surgeons in Ireland, and since 1884 has been Vice-President of the Institute of Chemistry of Great Britain and Ireland: he is Examiner in Sanitary Science at Cambridge and the Royal Universities. In the first-named capacity he had the privilege of presiding in April, 1886, when, before a most distinguished company, Fellowships of the Royal College of Surgeons in Ireland were conferred upon Professor Huxley, M. Pasteur, Sir James Paget, Sir Joseph Lister, Sir Spencer Wells, and Mr. John Marshall, F.R.S., for their great services to medical science. In addition to the appointments mentioned, he is also Lecturer on Chemistry and Geology in the Government Agricultural Institution, Glasnevin, and Chemist to the Royal Agricultural Society, which latter body he induced, in 1883, to found a Board of Examiners for Agricultural Students, and to grant a diploma in Scientific Agriculture.

Sir Charles Cameron has been President of the Surgical Section of the Academy of Medicine, and of various other bodies, and he is connected with most of the useful societies of Dublin. He is an Honorary Member of the Societies of Public Hygiene

of Belgium, Paris, and Bordeaux, the State Medical Society of California, the Royal Hibernian Academy of the Fine Arts, the Institute of Architects, etc.

Sir C. Cameron's greatest work, issued in June, 1886, is a "History of the Royal College of Surgeons in Ireland, and of the Irish Schools of Medicine," which includes a medical bibliography. This work is really a history of medicine and medical institutions in Ireland, and contains nearly three hundred biographies, some of which are very full, of the most eminent medical men in that country. Having had access to the Archives of the Royal College of Surgeons in Ireland, those of the Dublin Corporation, and of the Public Record Office, as well as to many private and public libraries, Sir Charles Cameron has been able to reconstruct a remarkable chapter of the forgotten history of the capital of Ireland. He begins with an account of the state of medical knowledge previous to the year 1700, wherein he throws great light upon the social condition of the country; and, tracing the gradual progress of medicine through the eighteenth century, describes the constitution of the Irish College of Surgeons, and the rise of its influence from that day to this, an influence which he shows to have been very beneficial to the many medical institutions of the country.

In 1887 Sir Charles Cameron and the Registrar General of Ireland were appointed by the War Office Commissioners to inquire into the causes of the prevalence of enteric fever in the Royal Barracks. Their report, laid before Parliament in February, 1888, shows that enteric fever is rifer amongst soldiers in barracks than amongst the civil population. The report is one of the most elaborate and complete on any hygienic question yet published, and its authors have received for it the thanks and approval of the War Office.

Sir Charles Cameron married, in 1862, Lucie, daughter of John Macnamara, Solicitor, of Dublin. She died, universally regretted, in 1883, leaving seven children; and her cousin, Mr. W. G. Wills, the novelist and dramatist, collected, and has published in pamphlet form, a number of testimonies to her high character and unselfish disposition, written by those who knew her.

BIBLIOGRAPHY.

"The Uses of Phosphates in Agriculture," Dublin, 1855.

"The Chemistry of Agriculture," London, 1857.

"A Guide to the Zoological Gardens, Phœnix Park," Dublin, 1861 and 1865.

"On Sugar and the Sugar Duties," Dublin, 1862.

"Lectures on Hygiene," London, 1868.

"The Stock-Feeder's Manual," London, 1868.

"The Handy-book of Health," London, 1869.

"Handy-book on Food and Diet," London, 1871.

"Reports and Papers upon Public Health," Dublin, 1874 and 1887.

"Manual of Hygiene and Compendium of the Sanitary Laws," Dublin 1874.

"Translations of Poems from the German," Edinburgh, 1876.

"The Catechism of Agricultural Chemistry and Geology," 1879. Edited by Sir Charles Cameron.

"The Water Supplies of Irish Towns," Dublin, 1885.

"History of the Royal College of Surgeons in Ireland, and of the Irish Schools of Medicine, including numerous Biographical Sketches; also a Medical Bibliography," Dublin, 1886.

"Johnston's Agricultural Chemistry and Geology" (last four editions). Edited by Sir Charles Cameron.

Selected Contributions.

British Association Reports: "The Assimilation of Urea by Plants," 1857; "On Acid Ammonium Selenate" (in conjunction with Dr. Davy), 1878.

Chemical News: "On Zincuretted and Ferruretted Hydrogen," 1860; "The Inorganic Constituents of Plants," 1862; "New Apparatus for Analysis of Carbonates," 1870.

Dublin Journal of Medical Science: "The Therapeutic Action of Ferric Iodate," 1869; "Ferric Acid as an Oxidizer," 1869; "Poisonous Action of Chlorine," 1870; "On a Mental Affection—Toxiphobia," 1876; "Typhoid Fever caused by Infected Milk," 1879; "The Plurality of Fevers designated under the term Typhoid," 1879; "Is the Flesh of Animals affected with Pleuro-pneumonia fit food for Man?" 1877; "The Physiological and Therapeutical Action of the Iodates and Bromates," 1882; "Poisonous Properties of Borax and Nitre," 1882; "Low Gravity of Diabetic Urine," 1883; "Toxicity of Silicon Fluoride," 1887.

Medical Press and Circular: "Arsenic in Wall Papers," 1875; "*Post-mortem* Appearances in Strychnine Poisoning," 1874.

Cassell's Technical Educator: "Agricultural Chemistry."

Proceedings of the Royal Dublin Society: "Substitution of Rubidia for Potash in Plants," 1867; "True Cause of the Colour of Milk," 1875; "Absorption of Selenium by Plants," 1879; "Action of Water on Mercuric Sulphate," 1880.

Analyst: "Preparation and Properties of Mercuric Iodate," 1876; "On Estimation of Lead as Iodate," 1880; "Composition of the Milk of Forty-three Cows," 1881.

Transactions of the Royal Irish Academy, 1880: "Twelve New Compounds of Selenium" (in conjunction with Dr. E. W. Davy), 1882.

Lancet: "Poisoning by Œnanthe crocata," 1873; "Composition of Air in Cabins of Canal Boats," 1874.

Proceedings of the Royal Society: "On the Compounds of Ammonia with Selenium Dioxide" (in conjunction with Mr. J. Macallan), 1888.

Dublin Hospital Gazette, 1860-62: Series of Papers on "The Philosophy of Food;" "Influence of Food upon the Intellect."

Yours Sincerely
Phil. Gay

CHARLES CLAY,

M.D., Ext. L.R.C.P., L.R.C.S.

SOME account of the rise of Ovariotomy has been given in dealing with the biography of Sir Spencer Wells, included in the first volume of this work. It was there observed that Dr. Charles Clay, of Manchester, was the actual pioneer of the operation in Europe; for, though a few provincial surgeons in this country had reported isolated successful cases before him, it was he who first conducted a long series of operations, and showed that Ovariotomy was a real advance in the surgical art, and not merely a bold and successful experiment, depending upon the good fortune of the operator, and the recuperative power of the human frame. It is but necessary here to advert to the wonderful progress of abdominal surgery that has ensued—the removal of uterine tumours, of the enlarged spleen, of renal calculi, of the displaced, enlarged, or diseased kidney, and of suppurating hydatid cysts of the liver, the excision of portions of the stomach, and other such operations.

Dr. Charles Clay, for forty-seven years of Piccadilly, Manchester, was born on December 27th, 1801, at Arden Mills, near Stockport, and is therefore now (1888) in his eighty-seventh year, and is yet strong and healthy, residing after his long and useful career at the breezy seaside resort of Blackpool, in Lancashire, being succeeded at Manchester by his colleague, Mr. Dambrill-Davies. He is the son of the late Mr. Joseph Clay, a highly respected corn factor of Arden Mills.

Early exhibiting a love of all things connected with medical science, and being a diligent reader of every popular treatise upon the subject which fell into his hands, it was not long before he made a choice of his profession, and it was thought desirable to place him, when old enough, under the care of Mr. Kinder Wood, the principal Medical Officer to the Lying-in Hospital, and first Public Lecturer on Midwifery at the Medical School of Manchester, in Marsden-street, then just commenced. It was the example of this gentleman that prompted young Clay to turn his attention specially to Obstetrics, to which he thenceforth devoted himself, and very soon he was able to assist his master in the duties of the hospital, in forming a museum, in making diagrams for lectures, etc. To this training a residence of two years at the Manchester Royal Infirmary was added, the first occupied by assisting the physicians clerks in the duties of visiting out-patients, and attending the physicians during their hospital visitations; the second in attending the general routine of hospital duty,

under the direction of the House Surgeon and Apothecary. The first Medical School alluded to above was established in Manchester about this time, and Mr. Clay was one of the earliest pupils of its founder, Mr. Jordan. He also attended Blunstone's demonstrations, and the lectures of Mr. Wood on Midwifery, of Dr. Carbutt on Physiology, and of the celebrated John Dalton on Chemistry. It may be remarked that, during the period of his apprenticeship, Mr. Clay had read, and kept extensive notes of his reading, of not less than five hundred volumes.

In 1821 he matriculated at Edinburgh, and attended all the required courses within the walls of that University, under Munro, Hope, Hamilton, Fyfe, and others. He also took advantage of some of the lectures outside the University, as Dewar's and Brooks's, still showing his strong predilection for Midwifery. Although a pupil of Hamilton, he became a privileged assistant and pupil of Dr. Thatcher, for whom he had the highest esteem and regard, a feeling which that worthy teacher reciprocated.

In 1823 Mr. Clay took the licence of the Royal College of Surgeons, and in the same year recorded in the *Edinburgh Medical and Surgical Journal* cases of the use of Secale Cornutum, which he, with Dr. Merriman, was the first to bring into practical use in this country. Though prepared for graduation, he preferred a few years' practice, and, with this intention, returned to England, and settled at Ashton-under-Lyne, a few miles from Manchester, and still nearer to the place of his birth. At this time he married the eldest daughter of Mr. J. Vaudery, surgeon, of Bredbury, near Stockport. The populous town and vicinity of Ashton-under-Lyne afforded him a wide field for practice, particularly in midwifery and operative surgery, for which he soon became celebrated, and his reputation was acknowleged for many miles around.

After fifteen years' general practice at Ashton-under-Lyne, where his wife and two children died, he removed, in 1839, to 101, Piccadilly, Manchester, having already attended, while in the former place, some seven thousand accouchements. He now entered upon a new sphere of action, as a writer for the public journals on literary, scientific, and medical subjects, turning to good account the often unprofitable early years of a consultant's life. At this period also, he married, as his second wife, the daughter of Mr. Joseph Boreham, of Haverhill, Suffolk, a congenial companion, who greatly assisted him in his literary labours.

During his first years of practice in Manchester, Dr. Clay occupied himself in his hours of leisure, and before professional work occupied his whole attention, in researches in geology, and archæology. In the year of his removal there he published a valuable work of "Geological Sketches and Observations on Fossil Vegetable Remains, etc., from the Great South Lancashire Coal Field," copiously illustrated by photographs and wood blocks. He had also a great interest in bibliography, and became a collector of rare books, as well as of objects of archæological

value. It may here be remarked that during a long period of years Dr. Clay brought together upwards of one thousand five hundred works on Obstetricy, and distributed one thousand volumes of them to the Medical Society's Library, of Manchester, and between four and five hundred to the Obstetrical Society of London, of which he was one of the original founders. He also collected upwards of one thousand editions of the Old and New Testaments, which were afterwards, in 1883, disposed of by auction, in London, by Sotheby, Wilkinson and Hodge, in nine hundred lots. In these years, too, Dr. Clay was diligently writing for the medical press the record of his already valuable experience. The greater number of his communications, exceeding one hundred indeed, have been published in the *Lancet*, with which he was first connected, and the *Medical Times*, but unfortunately it is impossible to name these in detail in the appended bibliography. His contributions to the former journal were so highly esteemed, that the editor of the latter, Mr. T. P. Healy, hastened to secure his services as a writer of articles on surgery, and of reviews of obstetric works, which did no little to enhance the position of that journal.

About the year 1839 Dr. Clay's attention was directed to the manner of operating on varicose veins of the legs, by Vienna paste, or slow caustic, proposed by Laugier, of Paris, and he tested it by at least fifty cases—being the first to make use of it in this country—in every one of which a permanent cure was rapidly effected, not the slightest bad consequence arising from any one of the cases. (Results reported in the *Lancet* and *Medical Times*, 1839 and 1840).

When the British Association paid its visit to Manchester, Dr. Clay read two papers before the Medical Section. One of these was on Diabetes, and in favour of its treatment by the mineral acids; and the other on a new form of Pessary, for prolapsus uteri, wherein the author showed the extreme absurdity of the old pessaries, and their utter uselessness for remedying the evil, with their positive tendency to increase the original mischief. The new instrument was a spiral coil of silver wire, so formed that when introduced the uterus would be kept in its proper position, but, at the same time, occupying so little space as to allow the vaginal coats to assume their normal position, and so regain both tone and strength—results altogether impossible with the old instruments.

We come now to the great turning point in Dr. Clay's professional career—his first case of Ovariotomy, in September, 1842, a few months after he had passed the Royal College of Physicians of London, a licence which he gained with the flattering notice of Sir H. Halford, Dr. Hue, Dr. Hume, and others. Dr. Clay had long given much thought to the feasibility of Ovariotomy, which had been foreshadowed by the phenomenal operation of Robert Houstoun, of Glasgow, in 1701, by the operations of McDowell, in America, about 1809, and by the isolated cases of Lizars, of Edin-

burgh, Granville, of London, Jeafferson, and a few others, beginning about the year 1825, as well as by the writings of the Hunters, of John Bell, and of Chambon. Dr. Clay favoured the extirpation of the diseased ovary by the long incision, reaching, if necessary, from sternum to pubis.

When the case of a Mrs. Wheeler came before him, in the year mentioned, he determined, after anxious deliberation, to operate, but he found it difficult to secure the assistance of his professional associates, who hung back in fear. At last, however, in the presence of Drs. Radford and Black, and of Messrs. Southam, Vaudrey, and Nursaw, a tumour was successfully removed, weighing no less than thirty-six pounds. A cast of this now historical tumour is still in existence.* The case having made a good recovery, was followed by several others, which are recorded in the eleventh and succeeding volumes of the *Medical Times*. Dr. Clay also published a monograph on the subject in 1842. Many condemned the operation, and the press was filled with adverse criticism, but Dr. Clay was not daunted, for Sir James Young Simpson, Sir A. Knight, of Liverpool, Drs. Elkington and Wright, of Birmingham, Dr. Bransom, of Sheffield, and Dr. Ranking, Mr. Braithwaite in his "Retrospect," and Dr. Radford stood boldly forward to support him; and his opinion and advice were soon frequently sought by those who were in doubt on the subject. It should be noted that, in Dr. Clay's first fourteen cases, the operation was performed without the use of chloroform, which greatly increased his difficulties, and testified to his unflinching nerve and to the fortitude of the sufferers.

Dr. James Blundell wrote to him, in 1842, saying: "My cordial congratulations on your success—not the hap of a lucky accident, but the well-earned result of a just mixture of enterprise, science, and exact care. You ask what, among others, I think? What I thought a quarter of a century ago—what I always thought, that truth is eternal, error perishable, but that some truths seen too soon are very annoying both to one's self and others—barbarous—blasphemous, etc. How angry error is when contradicted! To choose these cases well, I think with you is of the utmost importance. Adhesions ought, perhaps, to be made a reserved question. Valuable as these operations are in themselves (and I had almost said they are beyond price), with you again I think that, if possible, they are even more valuable in another, not to say a higher view. They complete the demonstration of the great principle (I have contended for it during twenty years)—they unlock the peritoneum—they unlock the serous cavities generally, and, to repeat your own remark, a 'few more years and I trust it will appear *abdominal surgery is at present only in its infancy.*' But, then, what an infancy! How full of bloom and promise!" Again, on October 14th, 1843, Dr. Blundell wrote: "I congratulate you very cordially on the brilliant results of your

* In Mr. Dambrill-Davies's possession.

last cases of ovariotomy. Applauded by all who have honesty and intelligence enough to appreciate your efforts, you may well persevere."

Sir J. Y. Simpson, who will always be honoured for his ungrudging support of the good work of others, sought Dr. Clay's help, was present at his operations, sent cases to him, and entered into a long correspondence on the subject of ovariotomy—a title for the operation which he was the first to suggest. In fact, with the Manchester operator's example before the profession, ovariotomy soon began to make way, and so widely was it made known, that Dr. Clay had in his possession upwards of two thousand autographs of medical men, who have corresponded with him on the subject from many parts of the world.

Dr. Peaslee, of New York, in his book on "Ovarian Tumours," says: "To Dr. Charles Clay, of Manchester, however, more than to all other operators, the credit belongs of having placed the operation of ovariotomy on a sure foundation. Fehr calls him 'the original hero of the operation.' He continued to maintain his preeminence, and at length overcame in a great degree the opposition in England to ovariotomy, by his fairness in reporting his cases, his scholarship, and especially by his success."

Mr. Lawson Tait, too, in his work on "Diseases of the Ovaries," writes: "Dr. Clay, who may in all truth be regarded as the 'Father of Ovariotomy,' as far as Europe is concerned, continued to operate with very remarkable success for many years, until he had performed three hundred and ninety-five operations with one hundred and one deaths, his total mortality being therefore about twenty-five per cent. Looking back upon the work of a generation now almost past, from a standpoint altogether free from personal bias, I have no hesitation whatever in ascribing to Dr. Clay by far the larger share of the credit which arises from the enormous advances made in abdominal surgery during the last forty years. It is quite true that McDowell, of America, was the first to do a number of ovariotomies; but it was Clay, of Manchester, who first showed that ovariotomy could be made an operation more justifiable by its results than any of the major operations of surgery. His methods were imperfect, as are the methods of all pioneers, but it was upon his work that the foundation was laid for all those brilliant results we now attain." Bryant, also, in his book on "Ovariotomy," entitles Dr. Clay "the first great apostle of ovariotomy in this country."

When Dr. Clay had operated seventy-nine times, he published, in 1848, a record which showed a mortality of twenty-four; but, as is the case with all vital operations, experience and practice soon gave him better results than these, which at the time were themselves thought very remarkable. In all, from private practice alone, he operated nearly four hundred times, as has been seen. We know, as might have been expected, still larger experience in hospital practice has enabled operators, building

upon the firm basis laid down by Dr. Clay, greatly to reduce the mortality arising from his cases. Few of the tumours removed by him have been less than twenty pounds in weight, many have been from thirty to forty pounds, and one has reached even more than seventy-three pounds. Those who have recovered have usually enjoyed good health, and have had no return of the complaint; many have become mothers.

It is impossible to over-estimate the vivifying effect of such brilliant successes upon operative practice. The profession, indeed, regards all bold innovations with just suspicion; it waits until continued success has demonstrated their soundness; it watches and weighs every circumstance concerning them; it never accepts a medical or surgical procedure unassured. In the case of ovariotomy, which is beyond question the boldest step that the surgeon has ever taken, it naturally waited a long time; but the extensive correspondence of Dr. Clay with his professional brethren shows that they were satisfying themselves as to the feasibility of the operation; and when at length they were convinced by his reported cases, and by the still larger hospital practice of Sir Spencer Wells, and other later operators, ovariotomy became established as a legitimate operation of surgery, and one leading to the best and happiest results.

Dr. Clay has performed almost every principal operation in surgery; but, before leaving this part of the subject, it should be stated that, in 1845, he extirpated an entire fibroid uterus by an abdominal incision, the patient doing remarkably well, and, on the fourteenth day, sitting up enjoying her food. In changing her bed, however, she was, through the nurse's carelessness, allowed to fall on the floor, whereupon inflammation set in, causing her death after two days' interval. We think we are justified in saying this was the first operation of the kind on record; but, by mistake, it was enumerated in the list of successful ovariotomies. Dr. Clay performed a similar operation in January, 1863, three months before Professor Koeberle's famous case, and the patient was alive in 1870.* At this operation Sir J. Y. Simpson was present.

Dr. Clay is the author of a number of works on Medicine and Surgery, some of which may be mentioned here. His "Observations on the Use of Inspissated Ox-gall," published in 1846, was very favourably received at the time, and was an interesting pamphlet on a subject not before treated at length by any English writer.† He also produced the "British Record of Obstetric Medicine and Surgery," for the years 1848 and 1849, a forerunner of the Obstetric and Gynæcological journals of the present day, which, although it was continued for two years only, is a valuable work of reference, because of the sterling character of its contributions. A special feature was made of translations of remarkable monographs by foreign authors, and many of

* *Obstetrical Transactions*, vol. v.

† An account of it will be found in the *London Medical Gazette*, of August 21st, 1846, p. 337.

great interest were published in its pages, such as those of Crantz on the Ruptured Uterus, Naegele on the Obliquely Contracted Pelvis, Puzos on Hæmorrhage, De Graaf on the Ovaries, Fischer on the Pelvis of the Mammalia, C. H. Dzondi on Congenital Fistulæ of the Trachea, Ascherson on Congenital Fistulæ of the Neck, Rathke on Bronchial Fissures, and Naegele on the Mechanism of Labour.

In the year 1856 Dr. Clay published his "Handbook of Obstetric Surgery," which gave a very concise but most accurate description of no less than *one hundred and eighty operations*, many of which were imperfectly, and some not at all, described in the treatises on midwifery that were then generally accessible to the student. It included every known operation, from the most simple and unimportant to the most difficult and dangerous, avoiding all tedious and unnecessary details, as well as all historical notices and argumentative disquisitions. The book contained an account of a case of Cæsarean section performed by Dr. Clay on a poor emaciated travelling pedlar, far advanced in phthisis, the child removed being dead, but the mother doing well until the fourteenth day, when she sank, though the wound had almost healed. The *British and Foreign Medico-Chirurgical Review* (1856) said of the volume: "Some of the articles—as Embryotomy, Spontaneous Evolution, or Expulsion, Hæmorrhage, Ovariotomy, and Version—*are so elaborate and complete, as to be worthy of taking rank with the best essays extant on the subjects.* The chapter on Chloroform is concisely written, and contains some good rules for its employment; the chapter on Uterine Hæmorrhage *is extremely comprehensive*; on Ovariotomy, the treatment, remedial and operative, is fully but concisely set forward. Few men would appear to have had more experience in regard to extirpation of the ovaries than Dr. Clay; and few, therefore, have a right to be heard more authoritatively upon this question, and in such cases the experience and practice of the author as laid down may be usefully appealed to." Dr. Clay's "Observations on the Term of Utero-Gestation," was a useful contribution to medico-legal literature, on a subject under debate at the time. He also published "Hints for an Obstetric Cyclopedia" (pp. 140), the articles under the letter A being completed; and his pamphlets on professional subjects are very numerous, and have done good service.

In order to show the estimation in which he has been held by his eminent contemporaries, it may be interesting to make an extract from the "Reminiscences of Foreign Travel," of Dr. Channing, Professor of Midwifery, of Boston (America). After speaking of Dr. Clay's excellent pessary, he remarks: "In September, 1852, I had a letter of introduction from Professor J. Y. Simpson, of Edinburgh, to Dr. Clay, of Manchester," and then remarks: "With Dr. Clay I passed many hours, in his carriage, in his study, at his table. He showed me some of the public works to which I have alluded, especially those devoted to the highest culture of the operative.

He has been a labourer, and a successful one, for his profession. 'The British Record of Obstetric Medicine, Surgery,' etc., etc., to which is annexed a library of rare obstetrical monographs, etc., is among the many works which he has contributed to medical literature. It was continued two years, and is as honourable to the author's industry as it is useful to the profession. I regard this as one of the most important additions to my library. Dr. Clay's library is rich in the rare and valuable in medicine. He showed me his treasures in this way, and most curious are they—copies of the earliest works in Midwifery, in endless editions and languages, the history of our art, in permanent and trustworthy records. Dr. Clay will have a lasting and honoured memory in his operations for the extirpation of diseased ovaries by the large incision. On a fly-leaf at the end of his publication of the results of these operations, he gives me the additional operations to this date, September 15th, 1852. That is fifty-five operations in all, of which seventeen died, *and thirty-eight recovered.* In his large experience in this way, he has had under his care the great variety of forms under which chronic diseases of the ovaries show themselves. He has operated on the least promising; and when his diagnosis, made with all care, has been amended, or set aside by the revelations of the operation, he has nevertheless gone steadily on, except in one remarkable case, in which it was clear that such was the extent of adhesions and size of the tumour, that to have proceeded must have produced fatal hæmorrhage. Dr. Clay has operated against a weight of professional opinion, heavy enough to have discouraged any man."

Dr. Clay's archæological inquiries have led him in the direction of Numismatics, and he is the author of a work on "The Currency of the Isle of Man, from its earliest appearance to its assimilation with the British Coinage," published in 1849, which was extensively illustrated by photographs. The author had, indeed, collected every known coin of the kingdom of Man, and he also made one of the largest collections ever formed of the copper and silver coinage of the United States, both collections being disposed of in New York. He was for some time President of the Manchester Numismatic Society, and edited its *Proceedings* in 1871 and 1872, and he is a Member of the Numismatic Societies of Brussels, Boston, U.S., New York, Montreal, and London. He is likewise a Member of the Medical Society of Manchester, of which he has been President, and an original Fellow and Paper Referee of the Obstetrical Society of London, a Member of the Gynæcological Society of Boston, U.S., of the Literary and Philosophical Society and Royal Institute of Manchester, and he has been Senior Medical Officer and Lecturer on the Principles and Practice of Midwifery, at St. Mary's Hospital, Manchester.*

* We are indebted for a number of the earlier facts in this biography to the *Medical Circular and General Medical Advertiser* of June 8th, 1853, as, also, for later *data* to Mr. W. R. Dambrill-Davies, Dr. Clay's colleague and successor.

BIBLIOGRAPHY.

"Geological Sketches and Observations on Fossil Vegetable Remains, etc., from the great South Lancashire Coal Field." Extensively illustrated by photographs and wood cuts. 8vo. London, 1839.

"Cases of Peritoneal Section for the Extirpation of Diseased Ovaries," 4to. London, 1842.

"Practical Observations on the Use of Inspissated Ox-Gall in the Treatment of Various Diseases, in connection with Derangement of the Digestive Functions, etc., etc.," 8vo, 1846.

"The Results of all the Operations for the Extirpation of Diseased Ovaria by the Large Incision," 8vo. Manchester, 1848.

"British Record of Obstetric Medicine and Surgery." Two volumes, 8vo, 1848-9.

"History of the Currency of the Isle of Man, from its earliest appearances to its assimilation with the British Coinage." Extensively illustrated by photographs. 8vo. pp. 250. 1849.

"Observations on the term Utero Gestation; with a view of correcting the opinion generally entertained in respect to Protracted Gestation," 8vo. London, 1855.

"The Complete Hand-Book of Obstetric Surgery; or Short Rules of Practice in every Emergency, from the simplest to the most formidable Operations connected with the Art of Obstetricy," 12mo. London, 1856.

"On the Severe and Obstinate forms of Vomiting during the latter months of Pregnancy," 8vo, 1857.

"On the Frequency of Abortion from Hereditary Diseases," 8vo, 1858.

"Hints for an Obstetric Cyclopedia: Biographical, Critical, and Historical." Items under Letter A completed. 8vo. pp. 140.

"Proceedings of the Manchester Numismatic Society." Conducted and edited by Charles Clay, President of the Society. 4to, 1871-2. Extensively illustrated.

DAVID DRUMMOND,

M.A., M.D.

THE subject of the present memoir is the third son of Mr. David Drummond, a Magistrate of the county of Dublin, and was born at Rathmines, in that county, in the year 1852. Above forty years ago his father left Stirling, in Scotland, and settled in Dublin, where he has maintained a high reputation as a philanthropic citizen, and has manifested a deep interest in all religious and charitable institutions. As a proof of public esteem in which he has been held, we may mention that not long since he was invited to contest the representation of the city in Parliament, in the Conservative interest, along with the present Lord Ardilaun, then Sir Arthur Guinness.

Dr. Drummond's early education began at Rathmines School, under the head-mastership of the well-known Dr. Benson, and continued at Broadstairs, Kent, where he was prepared by Mr. William Burbidge for the entrance examination to Trinity College, Dublin, which he passed in 1869. Having been enrolled a student in Arts and Medicine, he joined the Clinical Class of the Meath Hospital in the same year. In the University, Dr. McAlister's demonstrations in Anatomy, and Dr. Purser's lectures in Physiology, often since recalled by Dr. Drummond as models in teaching, were particularly appreciated by him, not only as rich sources of valuable information, but also of inspiration, at a time in the life of students when the initial unattractiveness and difficulties of their studies demand some such helpful, and even necessary assistance. In the Hospital Mr. Drummond had the advantage of the teaching of Dr. Stokes, then Senior Physician, and of Dr. Arthur Wynne Foot, the present distinguished occupant of the same position. Few of Dr. Stokes's students can have failed to profit by the peculiar system of teaching, initiated by Dr. Graves, and continued and developed by his renowned and revered colleague. But to such as shared the immediate friendship and private confidence of the latter, either as advanced students or in the subsequent pursuit of their profession, it will not appear strange to find his devotion to work, his enthusiasm, and his perseverance, with their consequent success, inherited by his pupils in various parts of the country. Soon after taking his degree in Medicine, the subject of the present sketch had the good fortune to associate with Dr. Stokes as his assistant in the wards, where he not only had the advantage of the illustrious physician's matured experience, but had the satisfaction of knowing that he possessed his confidence also, by the unhesitating way

faithfully yours
David Drummond

in which that gentleman delegated responsible work to his sole care. Nor was this all; for, when, through enfeebled health, Dr. Stokes could no longer visit the wards with his old regularity, so great was the degree of intimacy to which his pupil was admitted, that the latter enjoyed the rare privilege of private interviews (even at times in the bedroom) with him, during which he received valuable suggestions regarding important cases he had come to report. It is needless to observe what a great advantage this was to Mr. Drummond. A characteristic anecdote, illustrative of Dr. Stokes's professional zeal, combined with judicial impartiality, may here not inopportunely be inserted. On one occasion, when a patient had died, and our then student longed to perform a *post-mortem*, and, perhaps with more devotion than delicacy, promptly seized his opportunity, a complaint was subsequently made by the friends of the deceased against his conduct, and, being sustained, Dr. Stokes, his professor, as Chairman of the Medical Board, was called on to administer a formal rebuke to his too eager pupil. This over, the chairman and the professor parted company, and hardly had the reprimand been given, with due solemnity and ceremony, by the former, than the latter hastened from his seat to inquire diligently as to the results of his pupil's investigation, and, in kind words, almost apologized for himself, and lamented the pardonable collision between nature and art.

Another amusing incident of Dr. Drummond's student life had previously occurred, and illustrates the respective claims of two honourable, and sometimes even rival, professions. A very serious case of spasmodic affection of the larynx had been left in his care, with strict instructions to watch the first appearance of any serious indications, and to report it at once to the surgeon. In pursuance of these instructions Mr. Drummond unfortunately visited his patient just as the latter was receiving the last rites of the Church, which so aroused the indignation of the officiating priest that he reported the assiduous medical attendant. An examination into the circumstances, we need hardly say, brought him but a very mild censure. But the balance was fairly turned when, shortly afterwards, a man was brought in suffocating, as was afterwards ascertained, from a piece of bacon being lodged in his throat. There seemed to be no other course open than to perform tracheotomy, which was accordingly successfully done, our operator himself sucking the mucus, and thus saving the poor fellow's life; whereupon the kind-hearted priest grasped the student's hand, and thenceforth became his most ardent friend.

Of Mr. Drummond's other teacher at the hospital—Dr. Foot—it may be said that his conscientious strictness exacted from his pupils, especially those who held an official position under him, the thoroughness of work and accuracy of investigation which he himself constantly exhibited. Dr. Foot, therefore, it may be said, laid the foundations of those characteristics which notably distinguish Dr. Drummond as a

clinical physician. One fact may here be mentioned, as illustrative of the bent of Dr. Drummond's mind, by which his course as a medical man has since been determined—viz., that from the very commencement of his career as a student, he managed to find time to attend to ward instruction, a practice to which he attaches great importance.

After graduating as B.A. and M.B., in 1874, Mr. Drummond went abroad, and spent about twelve months in attendance at the Medical Schools of Prague, Vienna, and Strasburg, where he came into contact with Steiner, Bamburger, Recklinghausen, Friedlander, and others, and devoted most of his time to pathology and practical medicine. Under the two last named teachers he began the study of morbid histology, or practical pathology as it is frequently termed, a subject to which he now gives great prominence in connection with his Chair of Pathology.

Immediately after taking the degrees of M.A. and M.D., in 1876, Dr. Drummond settled in Newcastle-on-Tyne, and married the eldest daughter of Mr. George Angus, a gentleman well known through the North of England as an influential citizen, a successful merchant, and a liberal benefactor. His first appointment in Newcastle was as Assistant Physician to the Children's Hospital, and, twelve months later, he became full Physician there, a post which he retained for eight years—*i.e.*, for the full term of the appointment. He next was made Physician to the Dispensary, but resigned this office in 1878, on his appointment as Physician to the Infirmary, where, shortly afterwards, he was selected as Pathologist, in the room of Dr. Bramwell, who had resigned on leaving for Edinburgh. This new position furnished Dr. Drummond with an opportunity of gratifying the taste for clinical work, which, we have seen, had characterized him all through his early medical career. Rapidly his reputation as a clinical teacher grew, and his students began to imbibe the zeal and enthusiasm which they saw constantly exhibited in his work. We believe that the success of his teaching is due to the method he adopts, and endeavours to carry out to the fullest extent, which we may venture to describe. Every student is brought into close and personal contact with the case under investigation, and the old method of lecturing upon it, detailing its symptoms, and specifying its cure, is simply discarded. The students are ranged round the bed, and, after the clerk's usual report has been read, some one is called upon to examine the case. The prescribed order of investigation is rigorously insisted upon; point after point is elicited in exact order, duly noted, and then forms matter for comment; the attention of a listless student is aroused by his being invited to repeat the information already obtained, suggest the next step in the investigation, or indicate the disease to which the symptoms presumably point; where room exists for diversity of opinion as to the real nature of the disease, the determining features are carefully discussed with the more advanced

members of the class; questions bearing on the case are encouraged. Thus it comes to pass that, when the ward is visited, there is not a man in the class but has had some individual share in the examination, some part in the work, some personal contact with the patient. The clinical investigation being over, a *résumé* of the leading features of the case is given, and remarks are made on its differential diagnosis, prognosis, and treatment.

Our readers will recognize in this system certain principles which obtain generally; but the distinctive feature of Dr. Drummond's method is that he *insists* that every student shall take advantage of the opportunities afforded him for acquiring a personal and practical knowledge of his profession, and at the same time maintains, by a pleasant and felicitous intimacy which is essential to the success of this method, most cordial relations with those whom he teaches.

For seven years Dr. Drummond discharged the duties of secretary to the Northumberland and Durham Medical Society, whose *Transactions* he edited, and, by his energetic labours, he maintained the success of the Institution. For four years he was secretary to the North of England Branch of the British Medical Association, and, in this capacity, represented it at the Central Council; but the rapid and extensive growth of his practice has necessitated his giving up the secretariat of these Societies, and driven him to the more exclusive study of that department of Medical Science with which his name is more closely identified. We may add that he is a Fellow of the Medico-Chirurgical Society of London, and a Member of the Clinical Society of Newcastle. His connection with the Durham University College of Medicine dates from the year 1876. For some years he lectured on Physiology there; and, in 1883, was appointed to the chair of Pathology. In this latter sphere he established, for the first time in the history of this college, a class of Practical Pathology —a desideratum which, we believe, even some London colleges have not yet supplied. In this class every student receives stained sections of most of the important diseased structures, which, after mounting, are microscopically examined and discussed. Another feature of the class is the introduction from time to time, as opportunity offers, of fresh naked-eye specimens obtained in the *post-mortem* room of the infirmary, where upwards of a hundred and twenty necropsies were made during the past year.

Dr. Drummond's reputation in the field of medical literature is chiefly based on his contributions to general pathology, and more particularly to neurology. A survey of the titles of his published writings (which we append) will serve to show the wide range and general character of his observations; but it is due to him to indicate as briefly as possible what are the points on which he may fairly claim credit for originality, if not for priority of investigation and discovery. Thus, in his paper

on " Perforating Tumours of the *Dura Mater*," we believe he has effectively assailed the old opinion that these new growths are true cancer, and has not come far short of establishing the view that they are sarcomas. He has also pointed out the importance of double optic neuritis as an aid to the diagnosis of tumours that have either started as intra-cranial growths, or else have perforated the skull.

If not the first (and on a subject of this kind it is difficult to speak with infallible authority), certainly he was one of the first to maintain that an increased knee-jerk does not necessarily signify an organic lesion of the spinal cord, but rather is often a sign of hysteria. He has long taught that the plantar reflex is commonly absent in hysteria, a term which, by the way, he has laboured long and assiduously to get banished from professional use. From the very first he held and taught that the patella-tendon-jerk is not to be regarded as a true reflex within the ordinary acceptation of the term. In a case he recorded of infantile paralysis which proved fatal a few hours after the onset, and is probably the most recent case of acute anterior polio-myelitis reported, he has shown conclusively that the inflammation is by no means confined to the anterior cornual cells. To him, again, is due the credit of demonstrating that, in some cases at least, the sclerosed ribbons running through the posterior columns of the spinal cord are continued as sclerosed tracts up into the lateral hemispheres of the cerebellum.

Not the least of his valuable contributions to Medical Science is his having pointed out the value of auscultation of the column of air in the trachea in diagnosis of thoracic disease, while his description of the tracheal bruit in thoracic aneurism is now familiarly known to the profession. Nor must we omit to mention the credit that is due to him for calling attention to the close connection that exists between Pigmentation of the Skin and Graves' disease. In conclusion it may be said that Dr. Drummond's work on " Diseases of the Brain and Spinal Cord " has established his reputation as an author on nervous diseases.

BIBLIOGRAPHY.

"Observations on the Loss of Sensibility, or Anæsthesia, in Functional Conditions and Cord Disease." Newcastle-on-Tyne, 1881.

"Diseases of the Brain and Spinal Cord, a Guide to their Pathology, Diagnosis, and Treatment." London, 1883.

"Paralysis from Peripheral Neuritis". Newcastle-on-Tyne, 1888.

SELECTED CONTRIBUTIONS.

Northumberland and Durham Medical Society's Transactions: "Paralysis of the Pharynx in an Infant," December 13, 1877; "On a Strange Neurosis," February 14, 1884; "On Some Forms of Poliomyelitis in the Adult," November 12, 1885.

Lancet: "Two Cases of Aortic Aneurism Treated by Galvano-puncture," August 9, 1879; "Case of Disease of Aortic Valves, presenting somewhat unusual Physical Signs," October 25, 1879; "Cascar Bark *versus* Digitalis," November 13, 1880; "Note on the Pathology of Pseudo-hypertrophic Muscular Paralysis," October 15, 1881; "Clinical Lecture on a Case of Medullary Sarcoma of the Liver, Lung, and Heart," October 21, 1882; "Clinical and Pathological Illustrations of Cerebral Lesions." January 1, 1887,

British Medical Journal: "Chorea Treated by Subcutaneous Injections of Curara," June 15, 1878; "Case of Early Womanhood," July 12, 1879; "Lateral Curvature of the Spine, Depending on Unilateral Pleuro-pneumonia," November 29, 1879; "Tabes Dorsalis without Locomotor Ataxy," April 2, 1881; "Two Cases of Rapidly-developed Unilateral Ataxia," July 30, 1881; "Auscultation of the Trachea and Mouth in Thoracic Disease," October 21, 1882; "An Unusual Case of Locomotor Ataxia," September 22, 1883; "On the Diagnosis and Nature of so-called Perforating Tumour of the Dura Mater," October 20, 1883; Clinical Lecture "On some of the symptoms of Graves' Disease." May 14, 1887.

Medical Times and Gazette: "Splenic Disease in Infants," August 7, 1880.

Dublin Medical Journal: "On the Use of the Hypodermic Needle in Diagnosis," January, 1880; "Case of Cerebellar Tumour," April, 1880; "On Pulsating Liver," October, 1881.

Brain: "On the Pathology of Infantile Paralysis," 1885.

Provincial Medical Journal: "On the Clinical Features of the Common Form of Alcoholic Paralysis," October, 1885.

The following unpublished papers have been read by Dr. Drummond before the North of England Branch of the British Medical Association:—"On the Pathology of Pulmonary Consumption;" "On the Diagnosis of Pulmonary Consumption;" "On the Difficulties attending the Localisation of Brain Lesions;" "On a Case of Acute Yellow Atrophy of the Liver." He also gave Addresses before the Newcastle Clinical Society, on the "Pathology of Jaundice," in 1884; and on the "Pathology of Cirrhosis of the Liver," in 1885; "On Floating Kidney," 1887.

SIR PETER EADE,

M.D., F.R.C.P., M.R.C.S.

SIR PETER EADE was born in the year 1825, and is the only son of the late Peter Eade, Esquire, of Blofield, Norfolk, and grandson of the Rev. Peter Eade, Rector of Cotton, in Suffolk, and of Stowbedon, in Norfolk—being thus the third in descent of the same Christian name.

Before proceeding to London for his medical studies, he served a term of pupilage at the Norfolk and Norwich Hospital, entering there under the late distinguished Surgeon to that institution, Mr. John Greene Crosse. Thence he passed to London, and entered at King's College—a school at that time in the height of its reputation, and possessing a medical staff unsurpassed or unequalled in combined working and teaching power. This staff at that period included Dr. Todd, Dr. G. Budd, Dr. Guy, and Dr. Royle, Messrs. Fergusson (afterwards Sir W. Fergusson), Partridge, Simon (now Sir John Simon), and Bowman (now Sir W. Bowman), and Professor Daniel as Lecturer on Chemistry.

As a pupil at the Hospital, Mr. Eade specially attached himself to the *clinique* of Dr. Todd, and not only served as his ordinary clinical clerk, but specially attended him in the semi-private early morning rounds of the wards, which at one period he was accustomed to make. From the facilities thus afforded of direct personal instruction Mr. Eade derived the greatest advantage, and a grand opportunity was opened to him, which was eagerly embraced, of becoming more intimately acquainted with the views of this learned physician, and of profiting by his sagacity, his far-seeing views of disease, and the clearness of his clinical expositions. Dr. Todd's views in relation to disease were unquestionably then often far in advance of the general knowledge of the day, and Sir Peter Eade has always considered that he derived very great and lasting benefit from the clinical instruction thus given.

At the end of his pupilage at King's College Mr. Eade not only obtained class prizes, and the Silver Medal of the College Medical Society, but also gained the Senior Medical Scholarship, then the highest prize to be obtained in the school. He has since been elected an Honorary Fellow of the College. In 1846 he gained the Silver Medal at the Annual Botanical Examination at the Apothecaries' Hall, London, and, in the following year, became a Member of the Royal College of Surgeons of England. He took his Degree of M.D. at the University of London in 1850,

Peter Cooper

having passed in Honours at the first examination for M.B., and at the second examination having gained a Medical Scholarship and three Gold Medals. His Fellowship of the Royal College of Physicians of London dates from 1873.

Dr. Eade settled in Norwich in 1856, as a Consulting Physician, and has practised in that important city ever since. Two years later he was elected a Physician to the Hospital there in the room of the late Dr. Goodwin, and had as his Physician-colleagues at that time the late Dr. Ranking and Dr. Copeman. Both these physicians left reputations behind them, as practitioners and authors, that fully maintained the high standard which the medical fame of the hospital had long before reached. The old Norfolk and Norwich Hospital, to which they and Dr. Eade were then attached, has been recently rebuilt in the most perfect manner, and on the most approved principles. The old hospital, erected in 1771, had become unhealthy and insufficient for the wants of the district, and so—mainly through the exertions and representations of its present senior surgeon, Mr. Cadge—it was determined to replace it by a new one. This new building was completed in 1883. It is on the pavilion principle, and contains rather more than two hundred beds; and it is worked on the system of always having two out of its eight large wards empty and purifying, other wards being in their turn emptied of patients and cleaned, and the former ones re-occupied. By this means all the wards are in turn kept empty for three or four months, and a complete purification of the whole building at stipulated intervals secured. To the hospital (old and new) Sir P. Eade has now been attached for nearly thirty years, and he is now Senior Physician to the institution. He also holds the position of Consulting Physician to the Jenny Lind Infirmary for Sick Children, and to the Norwich Dispensary, and he is Visiting Physician to the Heigham Hall Private Asylum.

The only distinct medical work from Sir P. Eade's hand is a small one entitled "Notes on Diphtheria," a disease of which he has had large experience in Norfolk, on its first appearance in England, and subsequently. In this book is summarized, not only his own experience of the disease, but also that of the many medical men with whom he has had opportunities of studying it in consultation. The various contributions of the practitioners of the district on this subject, made either to the Norwich Medical Society, or through other channels, are here collected by him and compared with his own experience. Norfolk was one of the first counties ravaged by diphtheria, on the appearance of the disease in this country, in 1857-8, and it is believed that a "Lecture on Diphtheria," by the late Dr. Ranking, of Norwich, was the first distinct publication in England on the subject. So also, some cases of "Paralysis after Diphtheria," published by Dr. Eade, in volume ii. of the *Lancet* for 1859, are believed to be the first distinctly recorded examples of this sequela of the disease in England.

Numerous contributions to the various medical journals have been made by him, among which may be mentioned papers "On Diabetes Insipidus," in Beale's "Archives of Medicine," in which a careful analysis of the urine in this disease is given; "On Neuralgic Pain of the Side" (*Medical Times and Gazette*), in which also attention is called to the frequent confusion, in the labouring classes, of painful affections of the joints due to weakness and exhaustion from overwork, with rheumatism; and "On a Disease of Carpenters" (*British Medical Journal*), wherein a peculiar affection is described that had been observed in patients following this occupation, which appeared to be due to over-exertion of the right arm and shoulder.

Sir Peter Eade has also, in several published papers in the *Lancet* and *British Medical Journal*, 1869-1876, called attention to the probably purely local nature of boils and carbuncles, and has illustrated by cases the powerful influence of local caustics, and notably of carbolic acid, in both aborting the earlier stages, and in checking the later and progressive increase of these special forms of disease. His views in this respect are strongly confirmed by subsequent experience; and the particular influence of watery solutions of salicylic and boracic acids in aborting these affections in their primary and nascent forms, and the presence of bacterial germs, both of which have still more recently been demonstrated, serve remarkably to support these views.

On the outbreak of the Cattle Plague in England in 1865, a disease which committed great and destructive ravages amongst the cattle and sheep in Norfolk, Dr. Eade was appointed one of a local committee to examine and report upon the subject. Of this committee he was the chief reporter, and one of the most active members. The report of the committee was presented, and subsequently printed and circulated. It conclusively showed, as the result of both observation and experiments, the intensely contagious nature of the disease, as well as its specific features; and unquestionably carried the knowledge of the affection considerably beyond that current at the time.

Shortly after this date, as will be remembered, a discussion arose in the journals as to the probability of the identity of cattle plague with small-pox, an identity which was strongly maintained by some eminent writers. These views were strongly opposed at the time by Dr. Eade in some articles published in the *Medical Times and Gazette*, based upon his own personal knowledge and observation, and the baselessness of the views propounded was soon made evident.

In 1870, Dr. Eade published a lecture on his own parish of St. Giles, in Norwich, and he has recently edited and published a larger and illustrated work on the same subject.

A year later, on the occasion of the visit of the British Medical Association to the

city, Dr. Eade was nominated as President of its Medical Section, and in that capacity delivered a short introductory Presidential Address which was published in the *British Medical Journal* of that date.

Besides his purely professional work, Dr. Eade has taken much interest in the social welfare of Norwich, and may be said to have originated there, in 1866, a movement in favour of increased open spaces and recreation grounds for its inhabitants. His efforts in this direction have borne much fruit, and the movement has prospered. At the present time Norwich possesses a central public garden, well laid out, of nearly nine acres ; and has also recently obtained possession of a large tract of land, outside the city, known as Mousehold Heath, which is gradually being converted to the uses of the citizens, as a public recreation ground and "People's Park."

Dr. Eade served the office of Sheriff of Norwich in 1880-81, and during this term, had the satisfaction of officially assisting at the opening of the first wing of the new Norfolk and Norwich Hospital.

In 1883-84, he filled the office of Mayor of the city, and, in the October of 1884, had the honour, as Mayor, of receiving and entertaining their Royal Highnesses the Prince and Princess of Wales on the occasion of their visiting Norwich to attend its Triennial Musical Festival. On this occasion their Royal Highnesses also visited and inspected the handsome new hospital, then fully completed, which had been formally opened in the preceding year by their Royal Highnesses the Duke and Duchess of Connaught.

Sir Peter Eade was appointed a Magistrate for Norwich in 1871 ; and in 1885 he received, at the hands of Her Majesty the Queen, the honour of knighthood.

BIBLIOGRAPHY.

"Notes on Diphtheria," 1883.

"On the Parish of St. Giles, Norwich," 1870.

"Some Account of the Parish of St. Giles, Norwich," 1886.

Selected Contributions.

Lancet: "On Paralysis after Diphtheria," 1859; "Aneurism of the Aorta," 1861; "On the Local use of Cold in Abdominal Inflammations," 1876; "On the Medical Uses of Carbolic Acid," 1878; "On the Treatment of Boils and Carbuncles," 1869 and 1874; "On Scurvy in private practice," &c.

Medical Times and Gazette: "On the Prevailing Diseases of Norwich," 1864; "Neuralgic Pain of the Side," 1867.

British Medical Journal: "On a Disease of Carpenters," 1874; "On Boils and Carbuncles," 1876.

Beale's "Archives of Medicine," 1860; "On Diabetes Insipidus."

DAVID FERRIER,

M.A., M.D., F.R.C.P., LL.D., F.R.S.

DR. FERRIER was born in the year 1843, in Aberdeenshire, and received his early education at the Grammar School and Gymnasium, Aberdeen. He entered the University of that city as a student in Arts in 1859, having gained the first place in the competition for bursaries or scholarships. He graduated as Master of Arts in 1863, with double first-class honours in Classics and Philosophy. In the same year he gained the Ferguson Scholarship in Classics and Philosophy, open for competition to graduates of the four Scotch Universities. His tastes at this time lay specially in the direction of Philosophy, in which he was stimulated by the teaching of Professor Bain, and it was his interest in this subject that mainly determined his choice of Medicine as a profession. In 1854 he went to the Heidelberg University, where he prosecuted his psychological studies, and also began the study of Anatomy, Physiology, and Chemistry. In 1865 he commenced his medical studies proper at the University of Edinburgh, where he gained most of the University medals in his various classes, and graduated, with first-class honours, in 1868. After his graduation as M.B., he continued at the University as assistant to Dr. Laycock, Professor of the Practice of Physic, for whose brilliant and speculative intellect he entertained the highest admiration, and on whom he looks back as his most suggestive teacher. Wearied, however, with the drudgery of tutorial work, which absorbed all his time, he next went, in 1869, to act as assistant to Mr. Image, of Bury St. Edmunds, a practitioner of high repute in the eastern counties. There he remained for a year, engaged in congenial practice, and with leisure to prosecute his researches on the comparative anatomy and histology of the brain. Some of the results of these researches he embodied in his thesis on the "Comparative Anatomy of the Corpora Quadrigemina," for which he was awarded the gold medal on his graduation as Doctor of Medicine, in 1870. In the same year Dr. Ferrier came to London in order to assist Dr. Burdon Sanderson in his researches for the medical officer of the Privy Council, and also to lecture on Physiology in the Middlesex Hospital. These appointments, however, he resigned for that of Demonstrator of Physiology in King's College, in 1871.

In the following year Dr. Ferrier was chosen by the Council of King's College to succeed Dr. Guy in the chair of Forensic Medicine—the chair which he now holds.

At this period he intended to devote his attention specially to Forensic Medicine, but the more congenial study of Mental Pathology attracted him, and has since absorbed the greater portion of his time. However, his lectures on Forensic Medicine are greatly esteemed, and have been productive of much good to the students of his class at King's College. His Introductory Lecture on "Poisoning," delivered in 1872, consisted of a very interesting *résumé* of the history of the subject, and was pregnant with practical suggestions. Two years later, on a like occasion, he spoke of "Rational Medicine," urging a claim that therapeutics should be placed upon a rational scientific basis, as contra-distinguished from the position of almost pure empiricism. "Nearly every positive fact in regard to vital function," he said, "has been ascertained by the process of experiment on the lower animals. . . . . Why should we not follow the same course in our endeavour to arrive at a true scientific knowledge of the action of drugs on the animal economy? This is the method which the progress of modern research points out as the only one capable of furnishing that accurate knowledge respecting the action of remedies which is too frequently vainly assumed in the names which characterize groups of drugs in our pharmacopœias. . . . . The true physiological action of the agents we employ for the treatment of disease is absolutely necessary before we can combine a rational treatment with a rational pathology. To determine this we must have recourse to the method of experimentation on the lower animals." Dr. Ferrier's high purpose in all his experiments has not prevented him from incurring the special hatred of, and receiving a copious amount of abuse from, the anti-vivisectors, whose futile attempts to convict him of a transgression of the Cruelty to Animals Act, at Bow-street Police Court, will be fresh in the memory of many readers. In connection with Forensic Medicine it should be mentioned that Professor Ferrier assisted Dr. Guy in preparing the fourth and fifth editions of his well-known "Principles."

Early in his professional career in London Dr. Ferrier came into close and intimate relation with Dr. Hughlings Jackson, in whose advanced and philosophical speculations in cerebral pathology he took a keen and sympathetic interest. With a view mainly to test the accuracy of some of Hughlings Jackson's doctrines on the causation of epileptiform attacks, Dr. Ferrier, in 1873, at the invitation of his friend, Dr. (now Sir James) Crichton Browne, to contribute a paper to the West Riding Lunatic Asylum Reports, began a series of experimental researches on the brain. These led on to further and more extended investigations, which have been continued by him up to the present time.

Professor Ferrier's initial researches were directed, from a practical point of view, to discover the primary local source of mental disturbances, which, it is needless to insist upon, is a knowledge eminently desirable for alienists and cerebral pathologists.

The method of these experiments, which were made chiefly on the brains of monkeys, will be found described by Professor Ferrier in the West Riding Lunatic Asylum Medical Reports (vol. iii., 1873), and the general results were presented to the Royal Society, and are printed in its *Proceedings* and *Transactions.*

The first series of experiments related chiefly to localized lesions of several parts of the hemispheres of the brain, with a view to determine the significance, as regards sensation and motion, of the phenomena caused by electrical irritation; in the second series (which was described in the Croonian Lecture in 1875), the experiments related to a like object through the ablation or destruction of these localized centres. The general conclusions arrived at from the researches are too interesting to be omitted here. They are as follows :—

(1) Ablation of the frontal regions of the brain which give no reaction to electrical irritation is without effect on the powers of sensation or voluntary motion, but causes marked impairment of intelligence and of the faculty of attentive observation.

(2) Destruction of the grey matter of the convolutions bounding the fissure of Rolando causes paralysis of voluntary motion on the opposite side of the body, sensation remaining unaffected, while lesions circumscribed to special areas in these convolutions, previously localized by the author, cause paralysis of voluntary motion limited to the muscular actions excited by electrical stimulation of the same parts.

(3) Destruction of the angular gyrus (pli courbe) causes blindness of the opposite eye, the other senses and voluntary motion remaining unaffected. This blindness is only of temporary duration, provided the angular gyrus of the other hemisphere remains intact. When both are destroyed, the loss of visual perception is total and permanent.

(4) The effects of electrical stimulation, and the results of destruction of the superior temporo-sphenoidal convolution indicate that this region is the centre of auditory perception.

(5) Destruction of the hippocampus major and hippocampal convolution abolishes the sense of touch on the opposite side of the body.

(6) The sense of smell has its centre in the subiculum cornu ammonis or tip of the uncinate convolution on the same side.

(7) The sense of taste is localized in a region in close anatomical relation to the centre of smell, and is abolished by lesion of the lower part of the temporo-sphenoidal lobe.

(8) Destruction of the optic thalamus causes complete anæsthesia of the opposite side of the body.

(9) Destruction of the occipital lobes produces no effect on the special senses, nor on the powers of voluntary motion, but is followed by a state of depression and refusal of food not to be accounted for by mere constitutional disturbance consequent on the operation. The function of these lobes is regarded as obscure, but considered as being in some way related to the systemic sensations. Their destruction does not abolish the sexual appetite.

(10) After removal both of the frontal and occipital lobes, an animal still retains its faculties of special sense and the powers of voluntary motion.*

In order, however, that the localization of cerebral function might be still further studied, a grant was made to Drs. Ferrier and Yeo by the British Medical Association, and an additional grant to Dr. Ferrier alone by the Royal Society, and these

* *Philosophical Transactions of the Royal Society*, part ii., 1875.

gentlemen were thus enabled to present a finished monograph, with a most valuable array of corroborative facts, to the latter body, in January, 1884. The animals treated were again monkeys, mostly species of macaque, thoroughly narcotized with chloroform, and the operations were carried out under antiseptic precautions. The general conclusions were stated to be that lesions of the occipito-angular region cause affections of vision, without affection of the other sensory faculties or motor powers; that the auditory centre is situated in the superior temporo-sphenoidal convolution; that destructive lesions of the cortical areas, irritation of which by electrical stimuli causes definite movements on the opposite side, causes motor paralysis without loss of sensation, limited (monoplegia), or general (hemiplegia), according to the position and extent of the lesion; that experiments on the frontal lobes show a remarkable absence of physiological symptoms in connexion with the almost entire destruction of the prefrontal regions, or anterior two-thirds of the frontal convolutions; and that, by destructive lesions confined to the cortex and medullary fibres of the inferior and internal aspect of the temporo-sphenoidal lobe, without implication of the crus cerebri, basal ganglia, or internal capsule, it is possible to cause complete anæsthesia (cutaneous, muscular, and mucous) of the opposite side of the body, without paralysis of voluntary motion.*

The question of the localization of cerebral function, though now established in physiology and clinical medicine, gave rise to much discussion as to the true significance of the results obtained, and many divergent views were expressed. The question was eagerly debated at the International Medical Congress of 1881, when Professor Golz, a champion of the Flourentian system of the unity and indivisibility of the organ of mind, brought with him from Strasburg a dog, in which he had long previously destroyed a large extent of the cortex of both hemispheres, the animal retaining both its volitional control of its muscles and all its sensory faculties. A committee, however, which was appointed, found that the lesions did not affect the whole of the so-called motor regions of the brain of the dog; and two monkeys were brought, one of which, with the greater portion of the region in the left hemisphere, called motor, destroyed, had remained hemiplegic on the right side since the operation, while the other, whose superior temporo-sphenoidal convolution had been destroyed, was absolutely deaf. Thus the localization of function was held to be established, and will be found set forth in Professor Ferrier's work on "The Localization of Cerebral Disease," and in the recent publications of Charcot and Pitres, De Boyer, Grasset, Nothangel, Exner, and Ross.

Professor Ferrier believes that the localization of function in the brain will be of great practical value in the hands of the cerebral pathologist. "Tested by the

* *Philosophical Transactions of the Royal Society*, part ii., 1884.

standard of practical utility, what," he asked in his address to the Royal Medical and Chirurgical Society, upon the occasion of his receiving the Marshall Hall Prize in 1883, "has cerebral localization done, or is likely to do, towards a more successful treatment of cerebral disease than we yet can boast of?" Already Professor Ferrier believes it has given new precision to clinical and pathological descriptions, has cleared our conceptions as to the significance of numerous symptoms, has rationalized many purely empirical generalizations, and is every day bringing us nearer to what Virchow has termed the goal of modern medicine—viz., the localization of disease. "But," he says, "when this has been reached as regards cerebral disease, when we are able to determine the exact nature and position of the *materies morbi*, is it at all likely that we shall stop here?" Indeed, Professor Ferrier believes that there are now certain signs that we are within measurable distance of the successful surgical treatment of some of the most distressing and otherwise hopeless forms of intercranial disease, an operation which will vie with the splendid achievements of abdominal surgery. Surgical interference, which he has strongly advocated, is now a question of the day, and he gives us hope that the agonizing headache, the torturing sickness, the racking convulsions, the loss of sight, the progressive paralysis, and mental infirmity and miserable death from cerebral tumour, which we daily see and are powerless to avert, will ere long give way to the scalpel of the surgeon. Granting the natural hesitation of physicians to advise surgical operations on the brain, until the principles of diagnosis shall have become established, he asks, "Is there any reason why a surgeon should shrink from opening the cranial cavity, who fearlessly exposes the abdominal viscera?" The peritoneum, he points out, was until a very recent date held sacred and inviolable; and the dura mater and brain are much in the same position now.

But after what Professor Ferrier has seen of the unfailing safety, the freedom from all untoward results as regards health and life, with which the most formidable and repeated operations can be performed on the brain and its coverings, under stringent antiseptic precautions,—and these on animals of the most delicate, almost human, organization,—he cannot but believe that similar results are capable of being achieved on man himself.

Apart from secondary inflammation and its consequences, which can be absolutely prevented, there is no risk to life from even extensive destruction of the cerebral hemispheres. It is true that, in attempts to remove tumours, or locally treat other forms of disease, we may injure or destroy healthy portions of brain tissue. And he asks, "What will follow?"

Not necessarily mental disorders or appreciable mental defect. With the exception of certain functions arrogated by the left hemisphere, we have for mental purposes practically two brains; and diseases are not always on the left side. The records,

and our daily experience of disease and injury of the brain, show that considerable portions of brain substance may be destroyed without great danger to mental stability. Paralysis may certainly ensue, more or less extensive, or defects in special sense, according to the position and amount of the lesion. Such risks undoubtedly exist, as well as others incidental to the operation itself, as is the case with all surgical operations.

"But the choice," Professor Ferrier concludes, "is not between this and any other mode of treatment, but between running these risks and certain death."*

He therefore is glad that certain successful cases, by Mr. Horsley, at the Queen Square Hospital, have begun to attract great notice, and believes that, even in ten years more, surgery will be able to boast of many brilliant triumphs in the treatment of the brain—the direct result of physiological examination. He naturally takes some legitimate pride in this great step which he has done so much to promote.

Professor Ferrier's fertile pen has contributed many papers to other questions touching cerebro-spinal disease, not the least important of which are his articles on "Hemisection of the Spinal Cord" and "Cerebral Amblyopia and Hemiopia."

Dr. Ferrier pursues his scientific investigations in the spare hours and holidays he can snatch from his professional work. He practises as a physician, devoting his special attention to diseases of the nervous system.

He was appointed Junior Physician to the West London Hospital in 1872, Assistant Physician to King's College Hospital in 1874, and full Physician in 1880. He also acted as Assistant Physician to the Hospital for Epilepsy and Paralysis, Regent's-park, from 1877 to 1880, when he was appointed Physician to the National Hospital for the Paralyzed and Epileptic. He was elected a Fellow of the Royal Society in 1876, and Fellow of the Royal College of Physicians in 1877. In 1883 his Alma Mater, the University of Aberdeen, conferred on him the honorary distinction of LL.D. He is also a Laureate of the Institute of France, a Corresponding Member of the Clinical Society of Paris and of the Academy of Medicine of Turin, and Marshall Hall Prizeman of 1883. He has likewise held the position of Examiner in Forensic Medicine to the Universities of Edinburgh and London.

* Marshall Hall Oration, 1883.

BIBLIOGRAPHY.

"The Comparative Anatomy of the Corpora Quadrigemina" (Gold Medal Thesis), 8vo, 1870.

"The Principles of Forensic Medicine" (with Mr. W. A. Guy, M.B., F.R.C.P., F.R.S.), fourth and fifth editions, 8vo, 1875 and 1881.

"The Functions of the Brain," 8vo, 1876 and 1884 (Translated into French and German).

"The Localization of Cerebral Disease" (Gulstonian Lectures), 8vo, 1878 (Translated into French and German).

"Brain; a Journal of Neurology," 1879, *et seq.* Edited by Dr. Ferrier and others.

SELECTED CONTRIBUTIONS.

Proceedings of the Royal Society: "Localization of Function in the Brain" (Croonian Lecture), 1874; "Experiments on the Brains of Monkeys," 1875; "The Functional Relations of the Motor Roots of the Brachial and Lumbo-Sacral Plexuses," 1881; "Note on the Motor Roots of the Brachial Plexus, and on the Dilator Nerve of the Iris," 1883.

Philosophical Transactions of the Royal Society: "Experiments on the Brains of Monkeys," second series (Croonian Lecture), 1875; "A Record of Experiments on the Effects of Lesion of Different Regions of the Cerebral Hemispheres," 1884 (with Professor Gerald F. Yeo, M.D., F.R.C.S.)

West Riding Lunatic Asylum Medical Reports: "Experimental Researches in Cerebral Physiology and Pathology," 1873; "Pathological Illustrations of Localization of Brain Functions," 1874; "Labyrinthine Vertigo," 1875.

British Medical Journal: "Historical Notes on Poisoning" (Introductory Lecture, King's College), June 8th and 15th, 1872.

Lancet: "Rational Medicine" (Introductory Lecture, King's College), October 3rd, 1874.

Medico-Chirurgical Transactions: "Cerebral Localization, a Review and Forecast" (Marshall Hall Prize Oration), vol. lxvii., 1884.

Brain: "Pain in the Head in connection with Cerebral Disease," 1879; "Vomiting in connection with Cerebral Disease," 1880; "Cerebral Amblyopia and Hemiopia," 1881; "The Localization of Atrophic Paralyses," 1882; "The Brain of a Criminal Lunatic," 1882; "Hemiplegic Muscular Atrophy of Peripheral Organ," 1883; "Case of Allochiria," 1883; "Glioma of the Right Optic Thalamus and Corpora Quadrigemina," 1883; "Observations on a Case of Cerebral Cortico-Medullary Glioma," 1883; "Hemisection of the Spinal Cord," 1884.

Princeton Review (New York): "The Organ of Mind," July, 1879.

REGINALD HARRISON,

F.R.C.S.

THE medical profession in the provinces is unquestionably fortunate in the number of its representatives who have obtained distinction in surgery. Our large centres of population, like Liverpool, Leeds, Manchester, and Birmingham, afford an excellent field for the practice of surgery; and as all these towns possess magnificent hospitals, the means of carrying out surgical details and cultivating the art are still further fostered, and it is there that some of the chief operations are performed. Mr. Reginald Harrison, of Liverpool, is one of the most widely known of provincial surgeons, who, because of his long study of pathology, his great anatomical knowledge, and his remarkable manipulative skill has obtained a high repute in the special domain to which he has devoted himself.

Reginald Harrison, the eldest son of the late Rev. Thomas Harrison, M.A., Vicar of Christ Church, Stafford, was born in Shropshire in 1837, and was educated at Rossall College. Without dwelling on his earlier career, it may be said that he received his medical education at the Stafford Infirmary, where, according to the old custom, he was apprenticed, and that he subsequently completed his studies at St. Bartholomew's. In 1859 he passed the Membership examination of the Royal College of Surgeons of England, and later, in 1866, he proceeded to the examination for the higher degree of its Fellowship, which he succeeded in passing. Selecting Liverpool as a field for practice, and being fortunate enough to secure the appointment of House Surgeon to the Northern Hospital there in 1859, he devoted himself to surgery. He subsequently, in 1864, became Assistant Surgeon to the same Hospital, and was made a Full Surgeon in 1866. At the Liverpool Royal Infirmary, also, Mr. Harrison was made House Surgeon in 1860, Assistant Surgeon in 1866, and Full Surgeon in 1874. He was likewise Demonstrator of Anatomy at the old Royal Infirmary School of Medicine, where, afterwards, he was for six years Lecturer on Anatomy, and for a like period Lecturer on Surgery also. In addition to these offices he held the Registrarship of the School of Medicine from 1865 to 1874.

This large experience of hospital life and practice gave Mr. Harrison many advantages, which he knew well how to make the best use of. While devoting himself to the general practice of surgery, it was not long before he attached himself specially to the study of genito-urinary diseases, and to their relief by operation. To this field

Reginald Harrison

of surgery Mr. Harrison has given unceasing attention, and he has contributed to the medical press a large number of papers upon it, which are the result of his own personal experience, wherein he has been enabled to throw great light upon many points hitherto obscure. He is also the author of several distinct works bearing upon his study. Of these his "Prevention of Stricture and Prostatic Obstruction," and his "Lithotomy and Lithotrity, with a New Method of Tapping the Bladder," have been for some time out of print. His chief work, however, was a volume of Clinical Lectures on Stricture of the Urethra and other surgical disorders of the urinary organs, delivered at the Liverpool Royal Infirmary, which was published in 1878. A second and enlarged edition was brought out in 1880, and a third edition appeared in 1887, which contains a reprint of the two smaller volumes alluded to above.

In addition to the large number of papers by Mr. Harrison relating to the surgery of the urinary organs, which have appeared in the medical periodicals of the day, and have been communicated to learned Societies both in London and the Provinces, he has been recently engaged on investigations as to the nature and causation of prostatic hypertrophy, and the influence of toxic urine on certain cases of operations on the urinary organs.

Mr. Harrison spent some time at Boston, U.S.A., in the beginning of 1878, where he had the advantage of seeing some of Professor Bigelow's earlier cases of lithotrity, with removal of the fragments of the stone by aspiration at a single sitting. On his return to England he exhibited, for the first time in this country, Dr. Bigelow's apparatus, and was amongst the earliest advocates here of this improved method of operating.*

Mr. Harrison has made many contributions to other departments of surgery, but those relating to genito-urinary diseases have been the most numerous and important. A fairly complete bibliography of his writings will be found below.

Although devoting himself to a special department of surgery, which demands close application and study, Mr. Harrison is by no means regardless of the external welfare of the medical profession, and he has on more than one occasion done battle for its interests. Thus in the *British Medical Journal* he has forcibly drawn attention to a subject well worthy of the attention of the profession and the public—viz., the proper recognition and reward of professional services. His letter was based on the statement that men, who would rather go to hospital than pay a few pounds to a medical man, will pay heavy bills to a lawyer or engineer; and that, on one occasion, a sum of two thousand guineas had been attached to a brief in order to tempt an eminent counsel who had retired to take up the case. On these data Mr. Harrison wrote :—"In one case it is presumed health, or even life, is at stake,

* *British Medical Journal*, 1878.

whilst, in the other, it is money or its equivalent. How dreadfully outraged society would feel if they heard of anyone paying a physician two thousand guineas for saving his life, not to say anything of preserving his health ; and yet I did not see any indignant letters follow the second paragraph I have quoted! Who is responsible for this strange anomaly? Is it the profession, or the public, or both? Is it not about time to do more than discuss this matter in the columns of our journals? Could not the heads of the profession, metropolitan and provincial, in the form of a Committee of the Profession, be induced to take up the subject, and endeavour to give it a practical form? Is there anything undignified in trying to obtain a juster recognition of professional services? Can there be any hope of doing good unless action spreads not towards, but from the direction I have endeavoured to indicate?"

"This letter," said the *Provincial Medical Journal*, writing on the subject, "fell almost still-born. Those who lead us are too frequently lost in cloudland—so absorbed in what is considered the higher aspects of medicine, that they are not able to come down to the level of such commonplace considerations as the pecuniary side of the profession. We venture to assert that, whilst it is well to aim at the advancement of medicine by original research—which is unfortunately nowadays confounded only with micrococology—still at the same time some attention should be paid to the practical ; and we agree with Mr. Harrison that it is not undignified to look after our pecuniary interests. Medicine never will command respect until its professors are in a better position as regards wealth, and we shall always be a poor profession, and without influence in the commonwealth, until we waken up to a recognition of some of the truths contained in Mr. Harrison's letters, and until our readers think them worthy of attention."

The *Provincial Medical Journal*, it may be mentioned, has paid great attention to this question of Low Fees, and has recently published a series of prize essays, which have done much to awaken the profession to the importance of the subject.*

At the memorable meeting of the British Medical Association at Liverpool, in 1883, when the basis of its constitution was broadened, Mr. Harrison delivered the Address in Surgery, taking as his theme "Recent Advances in the Surgery of the Urinary Organs." Again, in 1885, at the annual meeting of the Association held at Cardiff, he was requested to open a discussion in the Surgical Section on "The Diagnosis and Treatment of Tumours of the Bladder." This was followed by an interesting and important debate. At the annual meeting of the Lancashire and Cheshire Branch, held in the same year at Southport, Mr. Harrison read a paper "On the Treatment of Urethral Stricture by combining External and Internal Urethrotomy." The conclusions, based on ten cases that had been operated on by Mr. Harrison in

**Provincial Medical Journal*, October and November, 1886.

this manner, were that, by not allowing urine to remain in contact with the internal urethrotomy wound during the healing process, (1) rigors and fever were avoided, and (2) a cicatricial splice was introduced which hitherto had not shown any tendency to contract.

The surgical field taken up by Mr. Harrison is one which, for its proper and successful cultivation, requires many talents. Diagnostic accuracy, manipulative skill, and anatomical knowledge are all demanded ; experience then completes what special studies have prepared for. The surgery of the urinary organs is a form of specialism which needs no defence.

Mr. Harrison is a Fellow of the Royal Medical and Chirurgical Society of London; a Member of the Council of University College, Liverpool ; Surgeon to the Royal Infirmary there ; Lecturer in Clinical Surgery at the Victoria University ; Consulting Surgeon to the Bootle Borough Hospital and Seamen's Orphan Institute ; and was formerly Examiner in Surgery at the University of Durham ; Lecturer in Surgery and Anatomy at the Liverpool Royal Infirmary School of Medicine ; and Surgeon to the Northern Hospital. He has likewise been President of the Liverpool Medical Institution. He was elected a member of the Council of the Royal College of Surgeons in 1886. As Mr. Harrison is now in the prime of life, further valuable additions to the special subjects he has taken up may be expected from him.

In conclusion, it may be mentioned that Mr. Harrison took an active part in promoting the introduction of the Ambulance system in Liverpool from 1878 to 1881.

BIBLIOGRAPHY.

"The Prevention of Stricture and Prostatic Obstruction," 8vo. London, 1881.

"Observations on Lithotomy and Lithotrity, and the Early Detection of Stone in the Bladder, with a New Method of Tapping the Bladder," 8vo. London, 1883.

"Surgical Diseases of the Urinary Organs," 8vo. London, 3rd edition, 1887.

"The Lettsomian Lectures," 8vy. London, 1888.

"Injuries and Diseases of the Bladder and Prostate." Ashhurst's Encyclopædia of Surgery.

Selected Contributions.

British Medical Journal: "The Endoscope in Diseases of the Urethra," 1868; "Note on the Treatment of Mucous Polypus of the Nose," 1879; "On the Treatment of Stricture of the Urethra by Stretching," 1881; "On Tapping the Bladder from the Perineum through a Hypertrophied Prostate," 1881 and 1882; "Case of Litholapaxy," 1882; "Address on Surgery, British Medical Association," 1883; "Cystotomy by a Modified Lateral Method," 1883; "On the Treatment of Urethral Stricture by Combined Internal and External Urethrotomy," 1885 (and Gaillard's *Medical Journal*, New York, 1885); "Introduction to a Discussion on the Diagnosis and Treatment of Tumours of the Bladder," (read before a meeting of the British Medical Association,) 1885; "Epithelioma of the Tongue in a Girl," 1885; "A Case where Lithotomy was Twice Performed in Fourteen Months, with Remarks on the Recurrence of Stone," 1886; "Reunion of Median and Ulnar Nerves," 1886; "A Case where a Suppurating Spleen was Opened and Drained," 1888.

Lancet: "Imperforate Anus," 1876; "Extraction of a Pencil Case from the Bladder," 1877; "On the Local Treatment of some Bladder Affections, with Description of a Pessary Catheter," 1878; "On the Management of Patients with Prostatic Enlargement," 1879; "Clinical Lecture on Lithotomy," 1879; "On the Treatment of Gleet and the Prevention of Stricture by Irrigation of the Urethra," May, 1880; "On the Influence of Constitutional Drains upon the Development of Cancer," 1881; "On the Enucleation of Prostatic Tumours," 1881; "On the Radical Cure of Varicocele," 1882; "Fracture of the Thyroid Cartilage," 1882; "Urinary Tuberculosis," 1882; "Two Cases where both Breasts were removed for Scirrhus," 1882; "Filiform Bougies," 1883; "Ligature of Common and External Carotid Arteries," 1883; "Catheter Fever," 1883; "Prostatic Gout," 1883; "On some Points in the Treatment of Urinary Abscess, Stricture, and Extravasation of Urine," 1883; "A Study on the Dead Subject relative to Catheterism of the Ureters and Exploration of the Male Bladder," 1884; "Perineal Urethrotomy as an Antecedent to Amputation of the Penis by Lateral Flaps and Occlusion of the Urethra," 1884; "A Case of Fractured Pelvis and Ruptured Bladder, in which Median Lithotomy was performed," 1884; "Clinical Lecture on a Case of Removal of Scirrhus Cancer of the Prostate," 1884; "Villous Tumour of the Bladder—Removal," 1884; "The After-Treatment in Lithotomy, where the Bladder is Pouched or Sacculated," 1884; "Lithotomy in a Case where the Nucleus of the Stone was the Mouth-piece of a Tobacco Pipe," 1885; "On some of the Surgical Aspects of Renal Tuberculosis," 1885; "Case of Villous Tumour of the Bladder, with Operation," 1885; "Dislocation and Fracture of the Spine, with Recovery," 1885; "On the Treatment of some Chronic Forms of Suppuration of the Male Urethra," 1885; "On the Palliative and Radical Treatment of the Obstructing Prostate," 1886; "On the Causation and Nature of Hypertrophy of the Prostate," 1886; "Supra-pubic *versus* Perineal Lithotomy," 1886; "On Suction in the Removal of Foreign Bodies from the Bladder," 1887; "On the Possibility and Utility of Washing out the Pelvis of the Kidney and the Ureters through the Bladder," 1888.

Liverpool Medico-Chirurgical Journal: "On Fissure of the Vesical Orifice," 1882; "Notes on the Surgical Treatment of Hæmaturia," 1884; "A Case where a Piece of Rabbit Bone passed from the Intestine into the Bladder," 1884; "Observations on some Changes in Form of the Prostate and Floor of the Bladder," 1885; "On Toxic Urine in Relation to certain Surgical Operations on the Urinary Organs," 1886.

Medical Times and Gazette: "Acute Prostatitis," 1881.

Provincial Medical Journal: "The Treatment of Stone in the Bladder in Female Children," August, 1885; "The Diagnosis and Treatment of Tumours of the Bladder," September, 1885; "On Tunnelling the Large Prostate," March, 1886.

Transactions of International Medical Congresses: "Stone in the Bladder," 1881 (London); "The Treatment of Prostatic Obstruction by Section of the Gland," 1884 (Copenhagen).

Annals of Surgery: "Remarks on the Treatment of Stone in the Bladder," 1885.

ERNEST HART,

M.R.C.S.

ERNEST HART was born in London, in the year 1836. He was educated at the City of London School, under the Rev. Canon Mortimer, becoming Captain of the School, with its six hundred scholars, and Lambert Jones scholar, at the age of fifteen, in competition with John Robert Seeley, his senior in age, who subsequently was the first classic of his year at Oxford, and is now known to fame as the author of "Ecce Homo" and "The Expansion of England," and Professor of Modern History at the University of Cambridge. At the City of London School there are still traditions of the extraordinary facility with which Ernest Hart swept away every prize that was offered, his career in this respect being unparalleled, before or since, in the annals of the school. It is recorded that in one year, besides reaching the highest place in classics, and in French and German, he took all the essay prizes at the end of each term. This was found so discouraging to the other boys that it was resolved by the Committee in consultation to have a special medal struck as a joint prize for all the essays, and to distribute rewards to the other scholars as usual. His best-remembered feat was his competition for Chamberlain Scott's Theology Prize. In this paper he answered only two questions, refusing to answer the New Testament ones on religious grounds; but the answers for these two questions were such that the examiners felt bound to award the prize to him.

He was subsequently entered at Queen's College, Cambridge, and took scholarships for the purpose; but, as the degrees of that University were not then open to those of the Hebrew religion, he did not pursue his studies there, but entered at once at the St. George's Hospital, where he was allowed, by special resolution of the managers of the City of London School, to retain his scholarships. He received his medical education in part at Mr. Lane's School, Grosvenor Place, adjoining St. George's Hospital. At the Medical School, in the course of his first year, he took the first prizes in all the classes, and, in his second year, competed for and won all the second and third years' prizes; so that, in his third year, he was thought worthy to be nominated Demonstrator. Subsequently, he was presented by the Lecturers with a testimonial of plate for the services which he rendered in that capacity. Such was Mr. Hart's power of application, and retentiveness of memory, that, altogether, at school and college, he took the extraordinary number of 110 prizes. Later, he was

Yours sincerely
Ernest Hart

appointed House Surgeon at St. Mary's Hospital, and he returned for two years as Demonstrator and Registrar to St. George's. His membership of the Royal College of Surgeons dates from 1856.

Meantime, however, Mr. Hart's tastes for literary occupation and for public and social work had asserted themselves with irresistible strength. Whilst still a student even, during the period of the Crimean War, he had become deeply interested in the position of medical men in the navy, concerning which there were continual complaints. Applications had been made to the students of St. George's Hospital to volunteer for the fleet, and a meeting of the students was consequently summoned to consider the general question of the position of the medical profession in the naval service. Mr. Hart took a leading part in declaring that Naval Assistant Surgeons ought no longer, as was then the practice, to be relegated to the "cockpit" of the midshipman, but had a right to the treatment due to their position as professional men, and to their scientific acquirements. An association was formed, named the Naval Medical Reform Association, of which he and Mr. Timothy Holmes were the leading officials, and in which the medical students of all the other schools took part. An active agitation was carried on, which was completely successful, and which marked the commencement of a new era for medical men in the navy.

When the Association was dissolved, upon the successful attainment of its objects, in 1885, there remained a surplus which it was proposed to offer to Mr. Hart as a testimonial. At his request the sum was presented, in his name, to the Medical Benevolent College, and, in virtue of it, he was made a life governor of that institution. Subsequently, the movement was renewed, and again Mr. Hart entered into it vigorously. "I well remember," said Sir William Smart, speaking thirty years afterwards at Westminster House, "the striking figure and eloquent words of Ernest Hart, then only a student, on the platform at St. Martin's Hall, when he addressed the assembled medical students of London, and, with a vigour and enthusiasm which communicated itself to the whole assembly, entreated the body of students to remember that they had duties to their profession and to their country, and that, while eager to fulfil the duties which patriotism claimed from them, they demanded that the claims of education and of professional dignity should no longer be ignored, and that surgeons who entered the navy should be treated with the consideration due to education and trained officers. The path on which he then entered he has ever since trodden, and there is no name which is more universally beloved and respected among the medical naval officers of this country ; for they know that during his whole life he has laboured, and successfully laboured, on their behalf, and that he has never failed to use the influence of the position which he has acquired by his talents and his industry to secure to the medical officers of the army and navy the concession of successive

privileges. They know that to him, more than to any other man in his profession, or in the kingdom, they owe their present advantages." As will subsequently be seen Mr. Hart did much good service to the medical department of the navy. It was during his studentship, also, that he showed his great taste for literature, writing, at the age of eighteen, a succession of passionate pleas for the parliamentary emancipation of the Jews in *Fraser's Magazine*, which were reprinted as a separate *brochure*, and also a series of botanical and dietetic articles in *Household Words*, of which the late Charles Dickens expressed the very highest opinion. These were published successively as leading articles in the magazine. At the age of twenty-two Mr. Hart began writing current editorial articles and annotations in the *Lancet*, in conjunction with the late Dr. Henry Wright, and soon undertook the writing of them all, Dr. Wright having withdrawn from the office. Two years afterwards, at the age of twenty-four, he accepted a formal engagement as Co-editor of the *Lancet*, having, with characteristic independence, declined the position of Sub-editor.

During this time he became Surgeon to the West London Hospital, and to an Ophthalmic Hospital, then existing in Charlotte Street, with Mr. Timothy Holmes and the late Mr. Callender as colleagues. He had for some time been in practice in conjunction with the late Mr. Coulson in the city, and he quickly developed a large consulting practice, his professional receipts for the first five years of practice exceeding an average £2000 a year, and being probably higher than those of any other man of the same junior standing in the profession in London. This was largely owing to his extensive connection and high reputation among the wealthy members of his own religion, and to the large city practice which he rapidly obtained in conjunction with Mr. Coulson. At this time he introduced the method of treating popliteal aneurism by flexion of the leg at the knee-joint, and published in the *Medico-Chirurgical Transactions* reports of his successful cases.

Shortly afterwards, at the age of twenty-eight, Mr. Hart became Ophthalmic Surgeon to St. Mary's Hospital, in succession to Mr. White Cooper, and also Dean of St. Mary's Hospital School. This post he held for ten years, publishing from time to time papers on Ophthalmic subjects, and he also contributed to the *Moorfield's Hospital Ophthalmic Reports* a paper "On the Minute Anatomy of the Nerves and the Iris, and the Cellulary Body," in which, for the first time, the ganglionic network of the nerve, which lies upon the iris, was described and figured. He introduced into Ophthalmic practice the use of the medicated gelatine discs now so common, and of which extensive applications have been made in other departments of medicine and hypodermic surgery.

While engaged in assisting in the editorship of the *Lancet* Mr. Hart projected a Commission of Inquiry into the state of the London Workhouse Infirmaries and the

treatment of the sick poor, reporting upon the subject in conjunction with Dr. Anstie and Dr. Carr. Several cases had occurred in which there had been reason to believe that the sick, suffering from fatal illnesses, had been treated with much harshness and neglect; and, as the result of an inquest held at the Holborn Workhouse upon the bodies of two men who had died there, it was resolved to take action, for the inquiry exposed a scandalous state of things. In those days, as then appeared, no special arrangements were made for those dangerously ill, who were entrusted to the tender mercies of pauper nurses altogether incompetent, whose remuneration for their work was an extra allowance of beer. In this inquiry Mr. Hart did not escape opposition; his statements were questioned without avail, and he was threatened with an action for libel. The result, however, was that a meeting called at Willis's Rooms formed a deputation, headed by Mr. Hart, to the Government; the Duke of Westminster, the Archbishop of York, Mr. Maurice, Mr. Hughes, and Dr. Anstie joined a committee which met weekly at his house; a Bill was drafted, and subsequently Mr. Hardy's Act was passed embodying their chief proposals and constituting the Metropolitan Asylums Board, which has charge of the hospitals for sick poor, where they may be properly tended and cared for. The Duke and his friends instituted a public subscription for a testimonial to Mr. Hart, and some hundreds of pounds were speedily collected, but Mr. Hart expressed a wish that the matter should be dropped.

Another good work which Mr. Hart successfully prosecuted was his exposure of the iniquities of Baby Farming and other kindred evils. A secret commission which he established, prosecuting its inquiries in various directions, got a great deal of information together, which was presented in his evidence to a Committee of the House of Commons; and, as a result, the Infant Life Protection Act, which he assisted to draft, became law.

Mr. Hart has long been an active member, as well as chairman, of the Parliamentary Bills Committee of the British Medical Association, and, in that capacity, has done much valuable work, as will presently be seen. In 1864, when the Government introduced a Bill to enable the Secretary of State for India to dispense with competitive examinations, and to substitute for them a system of patronage in the Indian Medical Service, the Association properly regarded the proposal as derogatory to the honour and interest of the profession, and Mr. Hart led the opposition to it. Mr. Pope Hennessey, M.P., who took strong ground upon the question, read in the House of Commons a memorandum with which Mr. Hart had furnished him, and the Bill was defeated upon the third reading.

In the year 1866 Mr. Hart was appointed, by the Council of the British Medical Association, to the editorship of the *British Medical Journal*, an office he still holds,

along with the editorship of the *London Medical Record* and the *Sanitary Record.* When he took up the editorship of the *British Medical Journal* it was not a lucrative adjunct of the Association ; now its profits amount to £6,000 per annum, while the number of members of the Association has increased from 2,000 to more than 10,000.

From that time forward Mr. Hart has led a busy life, not only in his editorial work, but in promoting in many ways the welfare of the medical profession. Having, in 1867, been apprised that the Lords of the Admiralty proposed to establish a system of bounties to needy medical students in the schools—granting, to those who would bind themselves for ten years' naval service, a free bounty of £100 in their fourth year at the school—he forthwith organized an opposition to the scheme, which was universally considered derogatory to the honour of the profession, and calculated to interfere with its independence ; and the official minute and circular were withdrawn in consequence. Again, in 1874, Mr. Hart, as Chairman of the Parliamentary Bills Committee of the British Medical Association, prepared a statement, which he submitted to the First Lord of the Admiralty, drawing attention to the medical service of the Royal Navy, and making proposals for the removal of certain grievances. It happened that the Admiralty had the subject under consideration at the time ; and, in the next year, several concessions which the Committee had suggested as to rank, pay, and retirement were made.

We find that Mr. Hart has not been less energetic in regard to the Army Medical Service, for which he has procured several concessions. About the year 1872 the War Office proposed to make changes much to the disadvantage of militia surgeons, which the Parliamentary Bills Committee stoutly opposed, and the Army Warrant of 1873, chiefly owing to his instances, was so modified as to restore to the Medical Officers of the Army certain privileges of which they had been deprived. At that time the Army Medical Department was unpopular with the profession, and Mr. Hart, as chairman of the Committee, therefore presented various reports to the War Office, and was instrumental in drawing attention to the requirements of the service in the matter of pay, retirement, and relative rank. A complete scheme for the reorganization of the service was published in the *British Medical Journal* of January 1st, 1876. Ultimately, early in the year 1880, a new Army Medical Warrant was issued, embodying the chief points recommended by the Committee, and greatly improving the emoluments of Army Surgeons, and it had the effect of increasing the number of candidates for the Army Medical Service. Later in the same year Mr. Hart was concerned in a representation to the Government as to the grievances of the Medical Officers of the Indian Army Service, which was acknowledged to have been successful and valuable.

Following up this result, Mr. Hart at once set afoot inquiries as to the causes of

the extreme unpopularity of the Naval Medical Service, and a scheme which he prepared for its amelioration—wherein, amongst other things, he proposed that the pay of naval candidates at Netley should be equalized with that of candidates for the Army—was presented to the Lords of the Admiralty, who issued a new Medical Navy Warrant generally embodying its proposals. "The warrant," said the *British Medical Journal*, "is in a large measure the issue of our own efforts for the good of the service, and is based upon the memorandum of claims drawn up by Mr. Hart, and submitted by him at official request to the First Lord of the Admiralty by whom it was referred to a Departmental Committee."

Mr. Hart has not been less energetic in promoting several movements conducive to the social welfare of the community. Thus, in 1876, he was mainly concerned in organizing an association for establishing coffee taverns in London, which should be self-supporting, the object being to check intemperance; he likewise assisted in forming centres for cheap musical entertainments in poor districts, the Popular Ballad Committee being formed, and the Victoria Theatre turned into a Coffee Tavern and Temperance Music Hall. Popular Concerts are now given in various parts of London, and the Ballad Committee is engaged in training men and women in vocal and instrumental music. Again Mr. Hart sought to improve the condition of London by organizing the Smoke Abatement Movement, and it was chiefly due to him that the Smoke Abatement Exhibition was held in 1882, from which many practical benefits have followed. He is now Chairman of Council of the Smoke Abatement Institute. He has also been greatly concerned in the good work of the National Health Society, and of the Metropolitan Public Garden and Boulevard Association, of which he is Vice-Chairman. Of the International Health Exhibition of 1885 he was the projector, and an active member of the Executive Committee.

In building up the great organization of the British Medical Association Mr. Hart has had a large share, and, by its means, he has been enabled to do much good work, as has already been seen. From his demonstration of the truths about Vaccination, and his organization of the London Conference on Animal Vaccination, great public good has followed, and we are now provided at his suggestion with a State institution for vaccination direct from the calf. He has also done good service by organizing a scheme of scientific sanitation of the milk supply of the Metropolis. He has held the office of President of the Harveian and Quekett Microscopical Societies.

In professional questions generally Mr. Hart has always taken the side of the "rank and file." He led the movement for restoring to the medical profession the "Lost School at Oxford," with its rich endowments. He did much to obtain direct representation of the profession in the General Medical Council, and was nominated, but declined to serve, as a representative on that body. He has from the first warmly

supported the claims of women to medical practice, and has supplied the funds for two scholarships at the Medical School for Women.

In April, 1883, a meeting was held at Grosvenor House, by permission of the Duke of Westminster, at which five hundred gentlemen assembled to take part in the presentation to Mrs. Ernest Hart of a portrait of her husband. The Duke of Westminster was to have presided, but being suddenly summoned to the House of Lords, his place was filled by Mr. (now Sir Spencer) Wells, then President of the Royal College of Surgeons. Amongst the speakers were Sir Henry Thompson, Sir F. Pollock, Sir T. W. Charley, Dr. Cameron, M.P., Dr. Farquharson, M.P., Dr. Quain, and others. The address was an epitome of Mr. Hart's life-labours. The portrait was painted by Mr. Frank Holl, R.A., and is admitted by all who have seen it to be an admirable work of art, faithfully conveying the dark, keen, intelligent, well-cut features of the subject, and his small, wiry frame.

In 1884 Mr. Hart began seriously to study the question of founding a society which should afford to medical men the means of providing for their families in the event of sickness and disablement in practice, as well as of death. The medical profession has several charitable societies to relieve the sufferings and alleviate the calamities of disastrous sickness or failure, but, although more than one effort had been made, it had hitherto been found impossible to provide an annuity and sickness-fund such as those which the Friendly Societies supply for the working classes. The society established many years ago for this purpose had not met with any success and was quickly dissolved. After studying all the conditions, and obtaining preliminary replies to a circular which was extensively issued with a view of ascertaining a basis of vital statistics for the medical profession, Mr. Hart called a meeting of the profession at the annual gathering of the British Medical Association at Liverpool, and explained his proposed method of proceeding, and the organization which he had planned. These proposals were unanimously accepted by the meeting, and the society was founded under his presidency, Sir T. Spencer Wells, Dr. W. M. Ord, and Mr. J. R. Upton acting with him as first trustees, and the executive and general committees being nominated. Suitable tables were prepared by an actuary, and this society has since greatly prospered, so that at the present moment—three years and a half after its foundation—it has nine hundred members. It has accumulated reserve funds amounting to £20,000, and it is paying £40 per week in sick pay to members temporarily or permanently disabled. The finances are pronounced to be in a position of the utmost stability. The basis of success has been secured mainly by great economy in management, and by relying fully upon the principle of mutual association without payments to Directors, or payment of commissions to agents. The working expenses of the Society do not amount to more than five per cent. of

its premium income. This is the first society of the kind which has ever been successfully established among the professional classes, and it has proved to be an unqualified boon. Its success has led to the formation of two other similar societies for other professions, but their working expenses are much larger, and they are unable to offer equal advantages to their members.

Apart from purely professional subjects, it will be seen that Mr. Hart has taken an interest in many important social questions. His house has, indeed, been the centre of something more than charitable activity. His wife, a daughter of Mr. Alexander Rowland, of Lewisham, is a well-known worker and writer on scientific and social subjects, who enters into her husband's schemes, so that they work together, as Tennyson says, "Always thought in thought, purpose in purpose; . . . yoked in all purpose of noble end."

The schemes to provide recreation for the people, and the Donegal Industrial Fund, owe their inspiration perhaps more to Mrs. Hart than to her husband. We may here observe that Ireland seems to have especially attracted Mr. Hart's sympathy. His article, entitled "Forty Years in the Desert," written after a personal inquiry on the spot into the economic causes of Irish destitution and disaffection, no doubt prepared the way for the land clauses of the Irish Tramways Bill. Mr. Hart has aided by untiring energy and munificent donations, amounting to some thousands of pounds, the successful cultivation of cottage industries in the distressed districts of Ireland. The work is now being carried on by his wife for the benefit of the poor, and is known as the Donegal Industrial Fund. There was a varied and beautiful exhibit, attracting much attention, in the Old London Street at the International Inventions Exhibition, of the fabrics and articles made under the direction of this fund, and a permanent dépôt has been established at 43, Wigmore Street, W. The enterprise has largely developed, and is now giving employment to large numbers of cottagers, and has a national importance. Some account of the movement was given in the *Cornhill Magazine*, of July, 1886, under the title of "Work for Idle Hands," by the author of "John Halifax, Gentleman." The Government has recently made a grant towards the extension of this system of village technical teaching which Mrs. Hart is carrying out in Donegal.

Politically Mr. Hart began life some twenty years ago, when he acted as chairman of Dr. Humphrey Sandwith's election committee. In conjunction, too, with John Stuart Mill, he has long done battle for advanced principles. On his general political opinions we need not enter, but his views on questions affecting the profession, and his general policy on medical subjects, as well as what he has done for improving the status of the army, navy, and poor-law medical and sanitary service, and for vaccination, will be seen above. Mr. Hart has a wide acquaintance with men and manners in his

own country and abroad, his holidays being spent not only in the pursuit of health but of knowledge, and in examining the institutions and gaining an insight into the inner life of the countries he visits. For instance, he lately visited Egypt, and, though he went there for rest, he found time to make inquiries into the sanitary condition of the country, which appeared in his letters in 1885 in the *British Medical Journal.*

At the general election of 1885, when he was invited by the Liberals of Mile End to become their candidate, Mr. Hart had to encounter the unexpected and persistent opposition of the anti-vaccinators, and anti-vivisectionists, who chose to regard him, in his capacity as chairman of the Parliamentary Bills Committee of the British Medical Association, as their representative foe, and concentrated all their influence and large funds on the opposition which they raised to his candidature. They met with but little success, although the whole district was flooded for months with costly and highly illustrated literature. He failed by a small number of votes to secure election, but this his party holds was chiefly due to the persistence in the field of the Right Hon. A. S. Ayrton, who, in spite of strong representations from the heads of the party, insisted on splitting the Liberal interest and going to the poll, though he obtained only a small number of votes. The Conservative candidate was returned. Since that time Mr. Hart has been strongly urged by the heads of the Liberal party to accept a candidature for other constituencies, and for a short time yielded to the pressure, and was nominated as the official candidate for the Bodmin Division of Cornwall at the general election of 1886, but, at the urgent request of his friends, he yielded to medical advice, and declined a contest which the state of his health did not, in their opinion, justify him in carrying on. It is understood that, with the view of securing rest, Mr. Hart is withdrawing from many of his engagements, and proposes to enter upon a period of repose, which is, however, to a man of his temperament, not altogether incompatible with public engagements.

In conclusion it may be said that Mr. Hart is a great lover of art, and has paid much attention to the historic arts of Japan, a subject on which he has delivered a course of lectures before the Society of Arts.

BIBLIOGRAPHY.

"Report on Workhouse Infirmaries prior to Hardy's Act," 1865.

"Protection of Infant Life: an Inquiry into the practice of Baby Farming," 1871.

"The Mosaic Code," 1877.

"Truth about Vaccination," 1880.

"The Influence of Milk in Spreading Zymotic Disease," 1881.

"Memorandum on the Influence of Vaccination in the Prevention and Diminution of Mortality from Small Pox," 1883.

"Is it Desirable to take any and what Further Measures to Prevent the spread of Zymotic Diseases through the Milk Supply of our Towns?" 1883.

"The International Health Exhibition: its Influence and Possible Sequels," 1884.

"Regulation and Registration of Plumbers," 1884.

"Smoke Abatement," 1884.

"Local Government as it is, and as it ought to be," 1885.

"London, Old and New: a Sanitary Contrast," 1885.

"A Winter Trip to 'The Fortunate Islands,'" 1887.

"Spray from the Carlsbad Sprudel," 1887.

Selected Contributions.

Royal Medical and Chirurgical Society: "Treatment of Popliteal Aneurism by Flexion" (and in Holmes's "System of Surgery").

Fortnightly Review: "Hospitals of the State," 1886.

British Medical Journal: "Animal Vaccination: a Preliminary Report on an Investigation of the Results of Vaccination from the Calf in Various Countries," 1880.

Journal of the Society of Arts: "The Historic Arts of Japan" (a Course of three Lectures), 1886.

HENRY MACNAUGHTON JONES,

M.D., M.Ch., M.A.O. (*Hon. Causa*), F.R.C.S. I. and E., L.M.K.Q.C.P.I.

DR. MACNAUGHTON JONES was born at Cork, in 1844. He is the youngest son of the late Dr. William Thomas Jones, a much respected practitioner in that city, who was sheriff in 1827 ; and his mother, Helen Macnaughton, is the last surviving member of her family, which was a branch of the ancient Scottish clan of MacNaughton of that Ilk, descendants of the Nachtan Mor, of Argyleshire. He has two brothers in the medical profession, Dr. Leslie Jones, of Manchester, sometime president of the Lancashire and Cheshire branch of the British Medical Association, and Dr. William Macnaughton Jones, of Victoria, British Columbia. His eldest brother, Dr. Bedford Jones, is a well-known Canadian clergyman, and Archdeacon of Kingston.

Dr. Jones received his early professional education in Cork, where he learned very early, under his father's supervision, the routine work of a medical practitioner's life. He entered the Queen's College in that city, and passed the preliminary examination of the Apothecaries' Hall of Ireland in 1859, after which he served his time in his father's pharmacy. At that period he had gained a reputation for the great application and capacity for work which he has since shown, as is marked by the fact that he took the M.D. of the Queen's University in June, 1864, with very distinguished marks, when he was not yet twenty years of age. Moreover, in the following year, he obtained the Licence of the Apothecaries' Hall (this qualification being necessary for professional appointments then held by him in the Cork Lunatic Asylum and the Cork city gaol), and that of the King and Queen's College in Midwifery, as well as the Mastership in Surgery of the Queen's University. The Licences and Fellowships of the Royal Colleges of Surgeons of Ireland and Edinburgh were subsequently acquired. Dr. Jones's professional education was completed by visiting and attending, for several years, at the leading special hospitals and *cliniques* in Dublin, Edinburgh, London, and Paris, more especially those devoted to the treatment of affections of the eye, ear, throat, uterus, and skin. It is a remarkable fact, and one very characteristic of his career, that, in the year 1865, at the early age of twenty, he was appointed by the late Professor Joseph Henry Corbett, and the council of Queen's College, Cork, Demonstrator of Anatomy in that institution, an office which he held for ten years. He was also, during several years, Senior

Faithfully Yours

E. Macnaughton Jones.

Demonstrator and Lecturer on Surgical and Descriptive Anatomy; and for some time took Professor Corbett's place, during his illness, in the Physiology class-room. For part of this time he was largely occupied as a private teacher in the Cork School. In the year 1878 he was appointed by the Crown to the chair of Obstetrics and Gynæcology in the Queen's College, Cork, a post which he held until 1883, and he served for some time on the Council of the College.

Dr. Jones's connection with medical education in Cork, as teacher, lecturer, and examiner, was fruitful in good results to the many students there. By his ardent sympathy with their efforts and success he imbued them with a love for their profession, and they drew from him something of the philanthropic zeal which distinguished his labours, and a great deal of his energy in the pursuit of scientific truth. His lectures were remarkable for the large amount of information they conveyed, based on a wide hospital experience, they were, too, full of practical counsel, as well as eloquent and erudite, and enriched with the evidences of great general culture. His students recognized in him a clinical teacher whose final object was the alleviation of human suffering, and who was never forgetful of the great responsibility of his charge.

In the year 1868, when Physician to the Cork City Dispensary, he established the Cork Ophthalmic and Aural Hospital, to which he afterwards added a department for the treatment of Diseases of the Throat, and the labour of organizing and developing it fell almost entirely upon his own shoulders. This hospital—the only one of the kind in the south of Ireland—offered clinical advantages to the students of the Cork School of Medicine which they eagerly availed themselves of, and many of them afterwards became resident and extern assistants there. Dr. Jones has had the satisfaction of seeing the hospital enlarged to thirty beds, with an extern attendance of nearly two thousand patients annually, not only from Cork, but from the whole of Munster and beyond. In conjunction with Drs. Cremen, Golding, and Cummins, Dr. Jones also established, in the year 1872, the Cork Maternity, which was conducted on the principle of the Coombe Extern Department, and is now an established charity of the city, to which it has proved of the utmost value, over three thousand five hundred women having been attended at their own homes prior to Dr. Jones's resignation of his position as Consulting Physician, in 1883. For several years the active work and the responsibility of maintaining the Maternity fell upon his shoulders, as his original colleagues, one by one, retired. Chiefly through his indomitable and continued perseverence and labour its doors were kept open to the poor in the midst of difficulties, and it is still doing most useful work in the city. Two years after the foundation of the Maternity, Dr. Jones was requested by Miss Woodroffe, a philanthrophic lady of Cork, to undertake the organization of a Hospital for Women and Children in the city, which he

did, drawing up its original constitution and working energetically at its establishment. Considering the many impediments which had to be overcome in the organization and maintenance of this hospital in the earlier years of its existence, it is not to be wondered at that Dr. Jones looks upon its now established position with just and warrantable pride. An admirable feature of the hospital is the excellent school it provides for training ladies as skilled nurses. The institution was removed to a fine new building in 1885, and has now fifty beds. In that year it treated two hundred and three intern and one thousand three hundred and eleven extern patients.

Dr. Macnaughton Jones did other work in connection with various public institutions in Cork. In 1871 he was appointed Physician to the Cork Fever Hospital, ultimately becoming, through the death and resignation of his colleagues, Senior Physician. During the eleven years of his connection with this institution, he served through some severe epidemics, notably that of small-pox in 1872, of which he saw some sixteen hundred cases, being at the time Physician, under the Local Government Board, to the Cork Dispensary district, in which the disease raged. It was during the prevalence of a severe epidemic of typhus fever in his dispensary district that in 1868 he contracted a most malignant form of this disease, caught in the discharge of his duties. In one of his papers on fever he tells how he was in the dissecting-room, demonstrating to the students, with the maculæ of typhus on him, not suspecting the cause of his illness. But he nearly paid for this excessive zeal and rashness with his life, which was despaired of, during the progress of the fever, for several days. In the Fever Hospital itself he treated in all one thousand nine hundred and forty-four cases of infectious disease. In 1876 he was appointed Assistant-Surgeon to the Cork County Hospital, ultimately becoming Surgeon, an office he retained until he was compelled to resign it on leaving Cork. At this hospital, as at the special ones with which he was connected, he was a constant and indefatigable clinical teacher, and he was a great and universal favourite with the students of the Cork School of Medicine.

In the year 1874, the energy and interest of Dr. Macnaughton Jones led him to organize the South of Ireland Branch of the British Medical Association. This was the first branch formed in that country, and the London Committee of Council of the Association passed him a special vote of thanks for his exertions at the time. The practical value of this organization in advancing the cause of medicine in the south of Ireland, by associating the members of the profession together, and encouraging them to united work, cannot be overrated. Dr. Jones may well look back with pride to the meeting of the British Medical Association at Cork, in 1879, which was brought about entirely by his endeavours, and proved one of the most successful meetings, both from a scientific and social point of view, that the association has held since its foundation. "How," said the President of the Meeting, Prof. D. C. O'Connor, "can I

speak without apparent exaggeration of the exertions of Professor Jones in promoting the arrangements necessary for this meeting? When he first proposed inviting the association to Cork, I was nervous and alarmed at the magnitude of the undertaking; but I soon became aware that he made no miscalculation, and that he was able to realize his original promise by unceasing energy, tact, and thorough knowledge of the subject."

Dr. Jones held the post of President of the South of Ireland Branch of the Association, as also that of President of the County and City of Cork Medico-Chirurgical Association, which latter society, on the occasion of his leaving Cork, elected him an honorary life-member. In the various scientific and literary societies in Cork he was well known as a public lecturer, his services, which were ungrudgingly given, being constantly called into requisition in this respect.

In the year 1883, when Dr. Macnaughton Jones had been engaged for many years in these works in the City of Cork, he left the scene of his early labours and struggles, yielding to a most tempting offer to come to London. This unforeseen event occurred in consequence of a private charge which he took of a distinguished patient at the special request of Dr. (now Sir Morell) Mackenzie, during the absence of the latter in America, a sufficient tribute in itself to his special acquaintance with Laryngology. Coming to England in the autumn of 1882 for that purpose, and so well fulfilling the object of his mission, the inducements were subsequently held out, which caused him eventually to leave his native city. In order to do this he relinquished his chair and many other public official appointments, besides a very extensive private practice. The regret upon his departure was very great in all classes of society, and tokens of regard showered upon him on all hands. His own students of Queen's College presented him with a beautiful clock and mantel-piece ornaments in bronze, and with an address, in which they spoke of the great advantages they had derived from his teaching, and of his untiring efforts on behalf of the institutions of the city. To the citizens of Cork, who presented him with another address, and a handsome present of plate, he spoke feelingly: "Far beyond any measure of success or ability on my part is the testimony of your good wishes, sympathy, and friendship, evinced in this manifestation of your approval of my career in the field in which I have laboured in this my native city. To say 'farewell' to Cork has necessitated the wrenching of numerous ties and friendships; if I say of as many personal friendships as most men of my age could hope to form, I do not, I think, exaggerate. Keenly I have felt the gradual plucking up of the roots spread so deeply in the congenial soil. So much so that I doubt me, had I realized how difficult the process of transplantation would prove, if I could ever have disturbed the tree so firmly fixed." Other addresses were presented to Dr. Jones by the South of Ireland

Branch of the British Medical Association, and the Cork Medical and Surgical Society, which, together, made him the present of a fine portrait of himself in oils. An address and salver were also presented by the Cork Medical Assistance Society, and Dr. Jones was publicly thanked for his services by the supporters of the Maternity, the Trustees of the South Infirmary and County Hospital, and the Hospital for Women and Children. But, though he has left Ireland, he has not lost his association with it. He was elected in 1885, and re-elected in 1886, President of the Irish Medical Schools and Graduates' Association, which now numbers over 500 members, and he has been for six years examiner in Midwifery and the Diseases of Women and Children in the Royal University of Ireland, and recently its Senate has conferred upon him the degree of Master of the Art of Obstetrics, *honoris causa.*

Dr. Jones has been very widely known for many years as a constant contributor to medical literature on a number of subjects in both Medicine and Surgery, which his varied work in so many fields has enabled him to treat of. Amongst the more special publications associated with his name are those on the Ear, which have great authority in the profession, being the outcome of extensive knowledge and practice. The first of these is the "Treatise on Aural Surgery," published in 1878, which, having been revised and enlarged in a second edition, was brought out in a third, or Student's Edition, in 1887. It was based on experience in the treatment of upwards of 5000 aural patients, chiefly in the Cork Ophthalmic and Aural Hospital, and was essentially practical in character. The author felt that the pathology of aural diseases was not sufficiently insisted upon, and that most students looked upon them as outside the pale of general Surgery; and he aimed by giving concise rules, founded upon his own observations, to awake an interest in this important branch of Surgery. The book is one of the most comprehensive written by any British authority on otological science, and has fully answered the purpose of its author. The "Atlas of Diseases of the Membrana Tympani" (the only British chromo-lithographic atlas of the subject), was intended to accompany and further illustrate the treatise, and it, too, was the result of long and careful examination, and a work of which any clinical teacher might be proud, for it was pronounced by competent authorities at home and on the continent to be the finest of its kind.

Besides these distinct works on Aural Science, Dr. Jones has contributed a number of valuable essays to medical journals on Ophthalmology, including a series of reports, published in the *Irish Medical Gazette*, on "Affections of the Conjunctiva, Cornea, Iris, and Sclerotic." In the *Dublin Monthly Journal of Medical Science* will also be found his "Questions on Ophthalmic Surgery," and his "Cases of Orbital Disease and Cataract Excision." When the British Medical Association met at Cork, in 1879, he read a paper on "The Action of Duboisine, Pilocarpine, Gelsemine, and

Eserine," at that time little used in ophthalmic practice, and, on the same occasion, exhibited a series of original drawings, illustrating various morbid states of the retina. These, and many other contributions to the study of eye-diseases, have given Dr. Jones a first place amongst ophthalmic surgeons, which his great success in the treatment of them has enabled him to maintain. Recently a series of papers on "The Therapeutics of the Ear and Eye" has been contributed by him to the *Practitioner*. During the years 1886-87, he wrote a number of interesting papers for the *Provincial Medical Journal* on Fevers.

He has also written largely and successfully on questions of General Surgery. His monograph on "Spinal Curvatures" was chiefly intended to show his experience of Sayre's method of treatment, in which he had been very successful. It also included some practical remarks on excision of the hip-joint, and on a number of interesting cases of tenotomy, as well as on antiseptic treatment; and Dr. Jones here recorded also his firm adhesion to Lister's method, which he had followed in every important operation during the previous ten years. At the meeting of the British Medical Association at Bath, in 1878, Dr. Jones gave the results of fifty cases of spinal disease, treated by suspension and plaster jacket, as well as of cases of excision of the hip-joint and neck of the femur. Again, at the Cork meeting, in the following year, he exhibited remarkable cases of recovery after aspiration in disease of the hip-joint, of removal of the entire tarsal bones of the foot, of removal of the os-calcis with recovery of the foot, and of straightened knee-joint after contraction and abscess. Several other of Dr. Jones's surgical contributions will be found named in the appended bibliography.

The "Hints on the Health of the Senses" is a simple, practical treatise for unprofessional people, couched in plain language and free from technicalities, intended to protect the public from the serious consequences which often flow from ignorance of apparently unimportant symptoms indicative of the health of the eye, ear, and other organs. It also holds out a warning against many baneful features which obtain in modern life.

Dr. Jones's long experience in Obstetrics and Gynæcology bore fruit in the year 1884 in the publication of his "Diseases of Women and Uterine Therapeutics," a work which was received with wide approbation, and of which a second edition was called for within five months from the first. This work has already reached a third edition, being considerably increased in size and re-written up to date. The author had considered the great difficulty which besets the student when, in his third or fourth winter session, he begins to study Obstetrics, and how little chance there is of his mastering the comprehensive treatises of Gaillard Thomas, Robert Barnes, Emmet, Karl Schroeder and others, and he aimed at making the book

a simple and practical manual for the student and practitioner. In the preface to the first edition of this work Dr. Jones makes some remarks on specialism in medicine, which called forth the approbation of Dr. Clifford Allbutt in his Gulstonian Lectures of 1884, and are well worth some consideration. "Unfortunately, many students look on the treatment of women's affections as a 'specialty,'" says Dr. Jones. "This is but one of the many disastrous consequences which have followed that modern parcelling out of the body into segments, and the handing over of it to this or that specialist to exercise his speculative ingenuity in the discovery of some diseased condition beyond the ken of the ordinary physician. A mushroom-like brood of specialists and specialties appear daily to be sprouting into existence. With some experience of 'special' work, I have come to the conclusion that, with the exception of ophthalmology and otology, there is, or rather ought to be, in the hands of most well-trained and well-educated physicians and surgeons, no necessity for that abandonment of the rightful responsibility, which, as physicians and surgeons, they should assure to their patients. To share such responsibility with another in consultation must frequently be alike their duty and their privilege. And the discharge of such duty brings at all times a pleasurable feeling to the practitioner, when he can call to his assistance a ripe and cultured experience, especially if that experience be founded on a wide and general knowledge of disease, and one which is unbiassed by the narrower views that grow out of a limited field of observation. It is a lawful ambition of the physician or surgeon to acquire a reputation for special work in any department or departments of medicine or surgery. But he can best apply this particular knowledge, who cultivates it without neglecting to improve his acquaintance with the diagnosis and treatment of disease in other organs." Dr. Jones proceeds to say that he does not allude necessarily to serious operations where exceptional experience and particular manual skill are required ; but he holds that disastrous effects have followed the craze for specialists, because it has encouraged an opinion that accurate knowledge can be gained only by the few, and because it has injured the professional position of the general practitioner. Indeed Dr. Jones's great desire is to establish the fact, which is now insisted on by many eminent practitioners, that, if a man work sufficiently hard, he can gain such experience in a great variety of medical subjects as will enable him, with necessary skill and knowledge, to treat most of the diseases to which the organs are subject. While recognizing that specialism has done, and will yet do, work that would not otherwise be accomplished, he holds it to be a mistaken policy for the general profession to hand over the several organs of the body to the charge of narrow specialists, however eminent.

Besides the works alluded to above, Dr. Jones has published several special monographs on the Administration of Anæsthetics, on Fevers, and on Ophthalmic

Therapeutics, which are named in the appended bibliography. His contributions to the periodical medical press, in the way of articles, essays, and reviews, have also been very numerous, and replete with information derived from practical experience. He is also known as the inventor of several useful appliances in obstetrics and otology.

In addition to his medical and surgical knowledge, Dr. Macnaughton Jones is a man of wide general culture, and has a great love for art. His understanding of the significance of it, and his critical and sympathetic appreciation of its pictorial forms, are indeed very great; and he is not without experience as a collector of art works. He possesses, moreover, the useful faculty of making friends, and his manner enables him to imbue those whom he meets with much of his own enthusiasm for science.

Dr. Jones married, in 1866, Miss Henrietta Gregg, third daughter of Mr. William Verlin Gregg, Crown Solicitor for Cork.

He is a Fellow of the Obstetrical and Gynæcological Societies of London, a Member of the Ophthalmological Society, and a Fellow of the Academy of Medicine of Ireland.

BIBLIOGRAPHY.

"Student's Chart of Medicinal Preparations," 1866.

"Lecture on Health: its Preservation and Value," 1872.

"Medical and Surgical Communications," 1873.

"The Study of Life," 1874.

"Clinical Teaching in Hospitals" (Presidential Address to the South of Ireland Branch of the British Medical Association), 1876.

"Medical Responsibility in the Choice of Anæsthetics," 1876.

"Practical Treatise on Aural Surgery" (Diseases of the Ear and Naso-Pharynx), 1878. Third (Student's) edition, revised and enlarged, 1887.

"Atlas of Diseases of the Membrana Tympani," 1878.

"Report on Anæsthetics," 1880.

"Practical Manual of Diseases of Women and Uterine Therapeutics," 1884. Third edition, 1888.

"On the Treatment of Spinal Curvatures by Extension and Jacket, with Remarks on some Affections of the Hip, Knee, and Ankle Joints," 1884.

"The Health of the Senses," 1884. Second edition, 1885.

Selected Contributions.

Medical Press and Circular: "Adenoid Tumours of the Naso-Pharynx" (from the French of Dr. Löwenberg), 1878; "Bichloride of Methylene as an Anæsthetic;" "Case of Hour-glass Contraction and Retained Placenta;" "The Action of Aconite and Quinine in Neuralgia;" "Cases of Disordered Innervation of the Throat;" "Dr. de Wecker's Peripheral Cataract Operation" (translation); Series of Papers on "Affections of the Ear," 1877-78; "Clinical Lecture on Affections of the Breast," 1884; "Therapeutical uses of Saccharine, 1887."

Lancet: Report of Clinical Lecture," 1876; "Removal of Thyroid Cyst;" "Removal of Neck of Femur;" "Operations on the Hand with Skin-grafting;" Operations for Contraction of Arm and Hand from Burn;" and "Subcutaneous Section of Tendons of Knee Joint," 1877; "Distant Transplantation," 1884; "Uterine Bougies"—new Form of—1884; "Demonstrating Speculum for Vagina," 1885.

Dublin Monthly Journal of Medical Science: "Indications for Enucleation of the Eye-ball;" "Diphtheria" (a Review), 1878; "Congenital Anomalies of Crystalline Lens," 1878; "Questions in Ophthalmic Surgery;" "Skin Affections" (Review), 1880; "Ocular Therapeutics" (Review), 1880; "Obstetrical Report, Cork Maternity, for Five Years;" "Photographic Sphygmograms:" "Microscopical Appearances in a Case of Congenital Alopecia;" "On Sayre's Method of Treating Spinal Diseases," 1887. "Cases of Orbital Disease;" "Cases of Cataract Extraction and Remarks;" "Remarks on Typhus Fever;" "A Sphygmographic Chart;" "Remarks on Nitrate of Potash in Acute Pneumonia;" "Report of the Small-Pox Epidemic at Cork, 1872;" "Anæsthetics," 1880; "Some Remarks on Aural Therapeutics," 1882; "Case of Congenital Alopecia."

Dublin Quarterly Journal of Medical Science: "Prolapsus Uteri;" "Tumour with Genital Organs attached;" "Horse-shoe Kidney, etc.,;" "Digitalis: its Action and Uses," 1866-68.

British Medical Journal: "Foreign Bodies in the Ear;" "On the Action of Duboisine, Pilocarpine, Gelsemine, and Eserine in Ophthalmic Practice;" "A Case of Anæmic Exophthalmic Goitre;" "Papers Read at British Medical Association Meeting, Bath, 1878;" "Case of Yellow Atrophy of the Liver;" "Ophthalmology in its Relation to Practical Medicine;" "Obstetrical Knowledge in Relation to the Standard of Medical Education," 1880; "Alcohol in Fever," 1880; "Various Reports of Cases;" "Remarks on Politzerisation, and a new form of Politzer's Bag."

Irish Hospital Gazette: "Series of Reports on Ophthalmic Diseases;" "Cases of Lachrymal Abscess and Fistula;" "Cases of Erysipelas of the Head, etc.;" "Cases of Typhus Fever treated with Digitalis,"

London Medical Examiner: "Fibroid Tumour of Uterus treated by Subcutaneous Injection of Ergotine;" "Epilepsy in the Dog, etc."

Provincial Medical Journal: "Recent Therapeutical Advances," February, April, and May, 1886; "Notes and Statistics of Fevers," Series of Communications, 1886; "Some observations on and Statistics of Fevers," June, 1886.

Practitioner: "Short Notes on Therapeutics"; "Eye and Ear," 1885-86.

SIR MORELL MACKENZIE,

M.D., M.R.C.S.

SIR MORELL MACKENZIE, who was born at Leytonstone, in Essex, in July, 1837, comes of a medical family. His father, Mr. Stephen Mackenzie, of the Mackenzies of Scutwell, was a general practitioner of considerable ability, known to many of the London physicians of the period for his great success in the treatment of patients suffering from those nervous complaints which are found on the border-land of insanity, and whose skill in this department was testified to many years ago by Mr. Brudenell Carter, in a little work which he wrote on Hysteria. Mr. Frederick Mackenzie, of Tiverton, the uncle of the subject of our memoir, was at one time a leading practitioner in the West of England, and is now enjoying his well-deserved leisure in that town, his son, Mr. Lewis Mackenzie, reigning in his stead. Dr. Morell Mackenzie's brother is the well-known physician, Dr. Stephen Mackenzie, of the London Hospital, and he has two cousins occupying prominent positions in medical practice at the West-end of London.

The mother of Dr. Mackenzie—a woman of great ability—who was a daughter of Mr. Adam Harvey, of Lewes, was left with a family of nine children, not very well provided for, when her husband was killed in an accident, being thrown from his gig in the year 1851. It was in great part due to his mother that Dr. Mackenzie was led to the study of Natural History, which, when he was quite a boy, contributed in no small degree to turn his attention to the pursuit of Medicine. The cost of a medical education, however, was greater than Mrs. Mackenzie could afford at the time; so, after having studied with Dr. Greig, of Walthamstow, her son was sent, in his sixteenth year, into the office of the Union Assurance Company, in Cornhill. Had it not been for the kindness of a relative, who, in 1856, placed him as a student at the London Hospital, he would possibly have been kept, despite his wishes, to a commercial career. While at that institution, Morell Mackenzie obtained the Senior Gold Medal for Surgery, as well as the Senior Gold Medal for Clinical Medicine, awarded by the governors. After attaining the Membership of the College of Surgeons in 1858, and passing the first M.B. of the University of London with high honours in three subjects, he went to Paris, where he studied a year under Nélaton, Trousseau, Ricord, and others. He then went to Vienna, where he followed Oppolzer in the medical wards, and had the advantage of the teaching of Skoda and

Sincerely Yours,
Jarrell Mackenzie

Rokitansky. He also studied several specialties—Skin Diseases under Hebra, and Ophthalmology under Jäger and Arlt, and, at the same time, he attended the classes of Zeissl and Sigmund. Whilst studying at Vienna, Mackenzie paid a visit to Hungary, and there became acquainted with Czermak, at Pesth, who was commencing experiments with the laryngoscope, which had been invented by Manuel Garcia. A friendship ensued between the two, and, had it not been that Mackenzie had decided to study for some time in Italy, it would have fallen to him to introduce the instrument into England. Meanwhile, however, Czermak himself came over, and it was not long before the use of the laryngoscope became general in this country.

On returning to England Dr. Mackenzie was appointed Resident Medical Officer at the London Hospital, and soon afterwards was requested to accept the additional office of Registrar, then established for the first time. While Resident Medical Officer he passed the second M.B. examination at the London University, taking high honours in several subjects, and he completed the M.D. degree in 1862. At this period he also wrote some papers in the *Lancet* and *Medical Times* on laryngeal affections as seen with the laryngoscope.

In 1862 he established himself in practice in George Street, Hanover Square, and, in the following year, obtained the Jacksonian Prize of the Royal College of Surgeons for his essay on "The Pathology and Treatment of Diseases of the Larynx." He had already resolved to make a specialty of throat diseases upon the recommendation of Dr. Herbert Davies and other friends, and, in 1863, he founded the Throat Hospital in King Street, Golden Square. This hospital has relieved nearly one hundred thousand patients since it was established. In 1883 the old hospital was pulled down, and a handsome new building was erected at an expense of £8000. When the hospital was first established in 1863, medical visitors flocked to it from all parts of the world, and most of the leading practitioners from America, who give their attention to throat diseases, made their studies at this hospital. It has also been taken as a model for similar institutions both in this country and in America.

In the early part of his career, about the year 1863, Dr. Mackenzie was one of the inaugurators of the Clinical Society, and a frequent attendant and constant speaker at the meetings of the Pathological Society, whose *Transactions*, from the year 1863 to 1873, show how constantly he was working at Pathology. In 1863 Dr. Mackenzie read a paper at the Annual Meeting of the British Medical Association, in which he described an invention of his own, by means of which the electric current could be applied directly to the vocal cords. This instrument is now universally employed by all throat specialists, and has been the means of restoring the voice in many thousands of cases.

In 1865 Dr. Mackenzie published his well-known work on "The Use of the Laryngoscope in Diseases of the Throat," which was well received by the profession, and soon reached a third edition. A year later he was appointed Assistant Physician to the London Hospital, the Medical College of which appointed him one of the lecturers on Physiology, a chair which he held for three years, while at the same time he gave a course of lectures on Diseases of the Throat. His colleagues offered him a special department for throat diseases, but this he declined, and, whilst at the London Hospital, his work was entirely that of a general physician, although of course many throat cases were referred to him. In 1873, having risen to the grade of full Physician, his private practice had become so extensive that he was regretfully compelled to resign his connection with the hospital. He has, however, continued ever since to give his lectures on throat diseases at the Medical College.

Dr. Mackenzie's essay on "Growths in the Larynx," published in the year 1871, was said by the *British Medical Journal* to be "one which is a model of honest and complete work, and as honourable to British Medicine as it is useful to practitioners of every country."

In 1872 Dr. Mackenzie edited the first edition of the "Pharmacopœia of the Hospital for Diseases of the Throat," in which, for the first time, the scientific use of lozenges was set forth. From an early period in the history of Medicine the steam of hot water, into which herbs and other vegetable products, such as camomile, hop, and poppy, with some other remedies, as iodine, creosote, etc., were put, has been used both by doctors and the lay public. Cough lozenges, also, have long been a popular remedy; indeed, morphia lozenges, of definite strength, were introduced into the "London Pharmacopœia" many years previously. It was not, however, until the "Pharmacopœia of the Throat Hospital" appeared that the use of lozenges, containing different medicaments in definite quantities, was organized on a scientific system. In the same way inhalations of a precise strength were recommended. Dr. Mackenzie was also the first to suggest the use of the *volatile oils*, such as those of pine, juniper, sage, cubebs, and thyme, and to propose a menstruum of light carbonate of magnesia and water, by means of which these oils could be suspended, and their essence diffused through hot water. Soon afterwards he invented the eclectic inhaler, a full description of which may be found in the fourth edition of the "Throat Hospital Pharmacopœia," by means of which apparatus the patient, instead of simply drawing in steam, inhales it together with air which has passed through the medicated liquid. This arrangement, which allows much more of the active principle of the medicament to be brought to bear on the mucous membrane, has been adopted by the inventors of the various inhalers which have since come into use. Dr. Mackenzie was one of the first to recognize the value of sprays for inhalation, and early read a paper on the subject before the Medico-Chirurgical Society.

A number of experiments on animals have been reported by him, the object of which has been to show that sprays or atomized liquids could penetrate to the small bronchial tubes. It was not, however, till after some years that this mode of using remedies came into general use.

Dr. Mackenzie's work on "Diphtheria," published in 1879, has had a large circulation, and has been translated into French, German, and Italian; while his lecture on "Hay Fever," first delivered at the London Hospital Medical College, and subsequently reprinted in the *British Medical Journal*, excited great attention both on the part of the profession and the public. This essay has gone through three editions in the book form, and the last edition has an appendix on "Rose Cold," an affection dependent upon some individual idiosyncrasy which is excited by the scent of the rose.

But the great work of Dr. Mackenzie is his book on "Diseases of the Throat and Nose," on which he was engaged for twelve years, the second volume appearing in 1884. He here gives an historical account of every variety of disease affecting the throat, from the time of the Greeks to our own day; the writings of all the great physicians, from remote antiquity to the most recent productions of Germany, France, Italy, and America, are not merely recorded but carefully analyzed and criticized. While putting before the public the experience of others, and doing ample justice to his fellow-workers, the author states his own views, and gives his own experience with great lucidity, and at the same time with so much compression that, in two volumes, he has given an incredible amount of information. This book, like some of its predecessors, has been translated into French and German.

Dr. Mackenzie has also published a work, entitled the "Hygiene of the Vocal Organs," which embodies the results of his unparalleled experience in the treatment of singers, actors, clergymen, and public speakers, and gives many useful hints for the cultivation and preservation of the voice. The chapter entitled "Special Hygiene for Singers" has brushed away many of the erroneous ideas which sometimes affect the artistic mind on matters of hygiene, and has called forth an unanimous verdict of praise from the entire press of the country. The work is now in its sixth edition, and a Danish translation has appeared.

Dr. Mackenzie, in the early part of his career, contributed many papers to the medical journals. The subjects of these articles, however, having generally been treated at greater length in his larger works, it is only necessary to call special attention to his papers on the etiology, geological distribution, and treatment of Goitre.

In the year 1885 Dr. Mackenzie published two articles in the *Fortnightly Review* on "Specialism in Medicine," which excited considerable attention in the medical world. "In discussing the nature of specialism," he says, "it will be easy to show

that in medicine, so far from being an evil, it is a distinct good, and that whilst it is necessary in some branches, it is, under certain conditions, desirable in all. Specialism is simply a recognition of the natural limitation of the powers of the human mind, and a deliberate concentration of a man's best powers on a single object. Thus stated, it would seem to be a mere truism to say that specialism is necessary for work to be effectual, and indeed this is accepted as an axiom in every other department of knowledge. In science and even in literature the mere accumulation of facts is so colossal that no single mind can hold anything but comparatively small fragments of the whole. The encyclopædic erudition of the Scaligers and Casaubons of a bygone age is altogether impossible to modern scholars; a scientific man who nowadays should, like Bacon, 'take all learning to be his province' would be in danger of being sent to associate with kindred enthusiasts in Bedlam. Nowhere is the change more evident than in medicine. Physicians of the present day read with a feeling of half-amused wonder the mere list of Boerhaave's writings, which include essays *de omni scibili* in medical and natural science, and marvel at the complex talent of Haller, who embodied in his own single person a fairly complete professional staff, besides being an accomplished linguist and a poet above mediocrity. Such leviathans of omniscience loom dim and gigantic through the vista of the past like the megatherium and mastodon of remote geological periods, and the type is as utterly extinct. In fact the *Zeitgeist* looks with suspicion on universal learning, and inclines to believe that the soundness of a man's knowledge is in the inverse ratio of its extent. Whoso, indeed, is not a specialist is at once set down as a dilettante. No one comparing the present race of physicians with those of a time not so very remote can fail to observe a remarkable dissimilarity, less from a strictly professional point of view than from the difference in their mental equipment. The older physicians were usually the foremost representatives of the best and widest culture of their time. At once scholars and men of science, they commanded respect more by the vastness of their erudition than, it must be confessed, by the results of their practical skill. They were often distinguished in literature. Arbuthnot and Garth could associate with the wits of their day without any sense of inferiority as regards culture. Our latter-day doctors have altogether lapsed from the category of scholars; they are now probably the least learned of the three liberal professions. Even as men of science we are no longer up to the level of our predecessors. The branches of knowledge which were formerly considered as ancillary to medicine are now on an altogether independent footing, and have even in a few instances renounced their allegiance to their former mistress. There are now anatomists and physiologists who have never set foot within the walls of a hospital, whilst, on the other hand, a knowledge of chemistry is deemed by many a superfluous accomplishment in a physician." This first article produced a

reply from Dr. H. B. Donkin, who pleaded the cause of the general physician, to which Dr. Mackenzie made a vigorous rejoinder, wherein he declared that "specialism, being a movement founded on the true principle of progress, and in harmony with the general 'stream of tendency' in these days, will gain strength and volume as it advances, sweeping away in its victorious current all the rubbish of pedantic prejudice and malicious bigotry that formerly defiled its waters and hindered their flow."*

The subject of this memoir, though a strong advocate for specialism, has always maintained that a very complete medical training, and a wide experience of general disease, ought to be the basis of education for the specialist; and in another article in the *Fortnightly Review* he puts forward the question: "Is Medicine a Progressive Science?" In this paper he has shown that he not only is well acquainted with many branches of his profession, but has extremely original ideas as to its future development. He proposes that there should be a State Department of Medicine, and that the public should be able to make use of the medical officers, but not be necessarily obliged to consult them. These medical men would be State officials, and would have regular promotion and pay, a certain number being engaged in medical researches bearing on the cure of disease, but not directly associated with medical practice. Dr. Mackenzie maintains that under the present system those practitioners who have the largest experience are unable to make it of permanent value, and that it remains entirely personal. Hence the progress of the profession is not nearly so great as it otherwise would be. He thinks also that if a *post-mortem* examination were made necessary in all cases of death it would be a great source of knowledge, and lead to the more rapid development of medical science. The following are the authors concluding remarks on the subject:

"It does not seem rash, therefore, to anticipate that medicine will in the future progress at once more rapidly and more surely than it has done in the past. The present condition of the science, the precision of our diagnosis, the abundance and efficacy of the therapeutic resources at our disposal, our knowledge of the cause, and power of forecasting the issue in many diseases, would appear miraculous to Hippocrates or Galen, and wonderful to Harvey, or even Edward Jenner. How far the art of healing will progress is a question which lies beyond my scope. There are certain limits which it can never hope to overpass, but within these bounds it will continue to advance indefinitely. Much of the traditional obloquy with which medicine is still sometimes assailed is founded on a misconception of its true aim and function. More is asked of it than of any other art or science. Prolongation of life beyond the patriarchal term; the extirpation of all disease; the immediate cure of all injuries; and the abolition of pain are among the modest demands made on medicine; and all

* *Fortnightly Review*, June and August, 1885.

this is to be done by the wave of a magician's wand, so to speak, without any regard for the inexorable laws of nature. People have long ceased to sneer at chemists for their inability to transmute base metal into gold, and engineers would not be expected to move Ireland, say, to the North Pole; but doctors are still reviled because they cannot enable a glutton to outrage all the laws of digestion with impunity, or *create* anew an organ destroyed by disease. Medicine has the threefold function of curing, preventing, and alleviating human suffering. As regards the first, we have made comparatively little headway; but if we do not cure more, we, at any rate, kill less, and that of itself is a good deal. I confess I do not share Professor Huxley's expectation, that a remedy for nearly all forms of disease will sooner or later be found in drugs. This hope seems to me not only baseless in itself, but likely to prove a will-o'-the-wisp to investigators. Means of prevention should be sought for rather than specific antidotes, which have seldom been discovered except by accident, and which often fail in the time of need. Much progress has already been made in the prevention of disease, and it cannot be doubted that in this direction lies the way for medicine to follow if it is to be truly progressive. Apart, however, from either cure or prevention, there is a vast field for the power of medicine to display itself. The art must not be judged solely, or perhaps chiefly, by crude statistics of recoveries and deaths. Even if it be conceded that the former are largely the work of nature, the veriest sceptic who has ever been ill himself or witnessed sickness in others, must confess that the physician can allay pain, ward off danger, soothe apprehension and infuse hope. Even when the issue is fatal, is it to be counted as nothing that death, although victorious, has been disarmed of its sting of physical anguish? It may be boldly asserted that if medicine never wrested a single life from an untimely grave, it would still deserve supremely well of humanity for its power of relieving pain. In nothing is the progressive character of the healing art more conspicuous than in the constant additions which are made to our means of dealing with troublesome symptoms, which even if they do not threaten life, make it miserable and perhaps useless. If it be the destiny of mankind to have disease always going about among them, seeking whom it may devour, it is still much that more and better safeguards should be found against it, that its ravages should be lessened, and that our life into which, brief as it is, such an amount of suffering may be compressed, should be rendered less and less subject to pain, and freer from bodily discomfort. On this ground alone medicine may well take its stand as a progressive science."

Early in May, 1887, Dr. Morell Mackenzie was summoned to Berlin, to visit the then Crown Prince of Germany, who was, and had been, suffering for some years from an affection of the throat, which baffled the skill of the German doctors. He performed a slight operation with forceps, removing a portion of the growth which

had formed in the larynx. He remained in Berlin for some days, and returned, after a fortnight's absence, to see his illustrious patient, who had the fullest confidence in him. It was then arranged that, as the Crown Prince and his family were coming to London for the celebration of the Queen's Jubilee, he should place himself in the hands of Dr. Mackenzie, to undergo a course of treatment during his stay in this country. The Imperial family arrived in June, and took up their residence at the Queen's Hotel, Upper Norwood, on the Doctor's recommendation. Dr. Mackenzie received daily visits from the Crown Prince in Harley Street, when he was sometimes accompanied by the Princess, and occasionally by his three daughters. The Imperial family then removed to Norris Castle, Isle of Wight, where the patient received occasional visits from Dr. Mackenzie, and the Doctor was there honoured by an invitation from the Queen to call upon her at Osborne, to report to her upon the state of the Crown Prince's health. The air of the Isle of Wight proving too relaxing, Dr. Mackenzie recommended the Prince to remove to the more bracing climate of Braemar, within an easy distance of Balmoral, and there marked improvement in the state of his health took place. The Prince, with his family, afterwards left England for Toblach, in the Tyrol.

Dr. Mackenzie was summoned, in September, 1887, to Balmoral to receive the honour of Knighthood at the hands of his Sovereign, for the past services which he had rendered. During his own holiday in Italy shortly afterwards, he made it his business to find some suitable spot for his Imperial patient to locate himself at for the winter. Toblach having proved much too cold, Sir Morell recommended his removal to Baveno, and afterwards to San Remo, where, at the Villa Zirio, was performed that operation of tracheotomy, which has been the means of prolonging one of the most valuable lives in Europe, and placing the illustrious Prince on the throne of his ancestors, his august father having died during his illness. Afterwards Sir Morell was installed as the friend and physician in whom the Imperial family placed the most implicit confidence, and the many marks of esteem and regard which have been incessantly showered upon him, were crowned by the new Emperor conferring upon him the Cross and Star of the Royal Order of Hohenzollern. Sir Morell, during the period of his attendance upon his Imperial patient, passed through a period of great anxiety, but the indomitable courage and energy, for which he is celebrated, never once forsook him, and he was able to hold his own, notwithstanding the unjustifiable attacks which were levelled at him by a large portion of the German press.

Sir Morell, since his connection with the Emperor of Germany, has been honoured by professional visits from all the members of the English Royal Family, who have evinced a great regard for him. Her Majesty, on the occasion of his last visit to

Osborne, presented him with a photograph of herself, graciously attaching her sign manual at the bottom. This holds a prominent position in Sir Morell's consulting-room, in which may be seen the signed photograph of the illustrious patient, in his uniform of Bismarck's Cuirassiers, together with that of the Empress and her daughters.

During his travels in the past five years, Sir Morell has been visiting the Leper Hospitals in various countries, and the result has been the production of a little *brochure* entitled, "Leprosy of the Air Passages," republished from the *Journal of Laryngology*, of which he is part editor.

Sir Morell Mackenzie is a member of the British Medical Association; a corresponding member of the Medical Societies of Vienna, Pesth, and Prague; one of the two honorary fellows of the American Laryngological Association, Signor Garcia being the other; a Fellow of the Medical Society of London; a member of the Pathological and Clinical Societies; a member of the Société Française d'Hygiène; Consulting Physician to the Hospital for Diseases of the Throat; Lecturer on Diseases of the Throat, and late Physician to the London Hospital; Physician to the Royal Society of Musicians, and Consulting Physician to the North Eastern Hospital for Children and to the Islington and North London Provident Dispensary.

BIBLIOGRAPHY.

"On the Pathology and Treatment of Diseases of the Larynx" (Jacksonian Prize Essay), 8vo, 1863.

"Aphonia Treated by Faradization of the Vocal Cords," 8vo.

"The use of the Laryngoscope in Diseases of the Throat," 8vo, 1865, etc. (Three Editions).

"Essays on Throat Diseases," 8vo, 1871 :—

I. "Hoarseness, Loss of Voice, and Stridulous Breathing, in Relation to Nervo-Muscular Affections of the Larnyx."

II. "Growths in the Larynx; with Reports of One Hundred cases treated by the Author."

"Diphtheria: its Nature and Treatment," 8vo, 1879, etc.

"Diseases of the Throat and Nose." Two vols., 8vo, 1880 and 1884.

"Hay Fever: its Etiology and Treatment," 8vo, 1884, etc.

"The Hygiene of the Vocal Organs," 8vo, 1886, etc. (Six Editions).

"Leprosy of the Air Passages," 8vo, 1887.

"Pharmacopœia of the Hospital for Diseases of the Throat," 1872. Edited by Dr. Mackenzie.

Selected Contributions.

Lancet: "On the Differential Diagnosis and Treatment of Bronchocele," 1872.

British Medical Journal: "The Etiology of Goitre, with special reference to its Geological Bearings," 1874.

Birmingham Medical Review: "The Geological Distribution of Goitre," "The Treatment of Goitre."

Transactions of the Pathological Society: Many Papers on Pathology, 1863-73.

Transactions of the International Medical Congress, 1881: "Local Treatment of Diphtheria," iii., 199, 208.

Reynolds's "System of Medicine": "Diseases of the Larynx," iii.

Fortnightly Review: "Specialism in Medicine, June," 1885; "Medical Specialism: a Rejoinder," August, 1885; "Is Medicine a Progressive Science?" June, 1886.

English Illustrated Magazine: "The Singing Voice," June, 1886.

MALCOLM MORRIS,

F.R.C.S. Edin.

MR. MALCOLM MORRIS, the well-known dermatologist, was born in Mansfield Street, Portland Place, in 1849, and is the fifteenth child and youngest son of Mr. John Carnac Morris, F.R.S., of the Madras Civil Service. As a specialist in skin diseases his reputation is world-wide, but it would be difficult to find anywhere a medical man whose specialism is based upon a greater experience of general practice.

Specialism in practice, it need hardly be said, is one of the most conspicuous products of modern medicine. Specialism, indeed, is the spontaneous outcome of advancement in any science, and expresses the ratio that exists between what is knowable on the one hand, and man's capacity for acquiring knowledge on the other. The matter is not so much one of division of labour as a recognition that a time comes in the pursuit of science when the limits of that science extend beyond the intellectual horizon of individual men. The best specialist is he who, before devoting himself to particular practice, has made himself master, as Mr. Morris has done, of the general principles that underlie all practice. He must be a general practitioner first, and a specialist afterwards. Against such a man it is impossible to urge the objection that he is cramped in mind, and has a limited sphere of action, or that he is unable to be influenced by any higher impressions than those that appeal to him through his particular line of practice. The subject of this present sketch—one of the best-known specialists in London—affords a good example of the manner of man such a practitioner should be. Mr. Malcolm Morris did not begin his professional career as a specialist. We do not find that within a year or so of his becoming qualified he had struck off into a special channel of practice.

Mr. Morris, who received his medical education in the first instance at St. Mary's Hospital, qualified as a member of the Royal College of Surgeons of England in 1870. His first appointment as a specialist dates from 1879, for in that year he commenced to lecture on Skin Diseases at St. Mary's Hospital, in conjunction with Dr. Cheadle. The nine years that fall between the two dates mentioned were spent partly in filling the office of house surgeon at St. Mary's Hospital, partly in studying at Berlin and Vienna, partly in acting as clinical assistant at the Blackfriars Hospital for Skin Diseases, and partly in general practice. It is probably to the knowledge

Very faithfully yours
Malcolm Leonard

acquired in the last-named avocation that Mr. Morris owes a very large share of his present success. Books may teach a knowledge of disease, but it is general practice alone that can teach a knowledge of patients; and no consulting physician or surgeon could have a better form of training than that provided by a few years of country practice. In the year of his appointment to St. Mary's Hospital Mr. Morris published his well-known "Manual of Skin Diseases," which is a systematic and well-arranged treatise, concise, pleasantly written, and, from a scientific point of view, most excellent.

Mr. Morris's reputation as a dermatologist dates from the publication of this manual. It was just what it professed to be—"a manual for students and practitioners"—and it was a work by a man who evidently possessed the rare qualities that make a good teacher, and placed before the profession, in a simple and unobtrusive form, a plain, vigorous, and practical account of skin affections. Since the issue of this manual Mr. Morris has published a large series of practical papers on skin diseases, the most notable being those dealing with parasitic disease and lupus. Indeed, his best work has been upon the treatment of the last-named disease.

All these monographs give evidence of shrewd and careful observation, and of a special regard for what is sound and practical in treatment. The most important of them will be found named below. Mr. Morris may honestly claim that whatever he has done he has at least done well.

The restless energy and vigorous enterprise of the subject of this sketch has not, however, stopped at the work of a dermatologist. It is doubtful if any other medical man in London has more to do with the medical literature of the present day than has Mr. Malcolm Morris. It is an open secret that to his skill and tact is due the excellent series of "Manuals for Students and Practitioners of Medicine"—of which he is editor—that is being produced with rapidity by Messrs. Cassell and Company, to whom Mr. Morris is adviser in the department of medical literature. In promoting the issue of the series it is evident that Mr. Morris has caught precisely the literary spirit of the time, and it will be no fault of his if these productions do not make a decided impression upon contemporary medical literature. It was under his editorship also that "The Book of Health" was produced, a work that is in many ways unique. The papers it contains are from the hands of a company of authors such as has certainly not before been brought together in the interests of popular hygiene. To this work the editor himself contributed the article on "The Skin and Hair."

When the *American Journal of the Medical Sciences*—a review perhaps without equal in the periodical literature of medicine for its particular purpose—was converted in 1886 into the *International Journal of the Medical Sciences*, Mr. Morris and Dr. Minis Hays of Philadelphia were appointed co-editors, and under their efficient charge the publication has started upon a prosperous and useful career.

At the opening of the Session of the Medical School of St. Mary's Hospital in 1886, Mr. Morris gave an address which attracted much attention, and deserves notice here. He dealt first of all with what he termed the "mystical element in medicine," whose traces are to be found in nineteenth century practice as a relic, not so much of weakness in the profession, as of ignorance in the public, amongst whom a knowledge of the elements of physiology should consequently be diffused. From this he proceeded to speak of "scepticism in medicine," the tendency that exists in students, reasoning upon insufficient evidence, to lose faith in the principles of drugs, merely because some put a blind and unthinking faith in certain specifics, while the opinions of others differ widely as to their efficacy. The true basis from which all scientific study must start, he said, was a just "materialism in medicine," which was the antidote both to mysticism and scepticism. Concluding, he urged the students to devote their lives to unselfish and self-sacrificing work. "It is too often necessary," said the *Saturday Review*, "to let the 1st of October pass without detailed comment on the addresses which are delivered on that important occasion; but Mr. Malcolm Morris has taken so new and so excellent a view that at least a few words of panegyric seemed called for."

Mr. Morris was a member of the Committee and Juror of the Health Exhibition of 1884, in which he took a great interest and was largely concerned, and one of the most important contributions to its literature was his little treatise on "The Ethics of the Skin." He has indeed a wonderful business capacity, which makes him one of the most active and influential members of the Committees of St. Mary's Hospital, of the Fever Hospital, of Epsom College, and of the Medical Benevolent Fund. He also is a Fellow of the Royal Medical and Chirurgical Society, and of the Medical Society of London, and a Member of the Dermatological, Neurological, Harveian, Pathological, and Clinical Societies, and of the British Medical Association, Personally he is a great favourite with the medical profession, being genial, witty. and most agreeable, and a great addition to the dinner table; and he is ever ready to lend a helping hand to his younger fellow-workers.

BIBLIOGRAPHY.

"Manual of Skin Diseases," 8vo, 1879.

"Ethics of the Skin" (Health Exhibition Literature), 8vo, 1884.

"The Book of Health," 8vo, 1883. Edited by Malcolm Morris, F.R.C.S. Edin.

SELECTED CONTRIBUTIONS.

Practitioner: "The History and Therapeutical Value of Arsenic in Skin Diseases," 1880.

Transactions of the Pathological Society: "On Piedra: a new disease of the Hair," 1880.

Lancet: "The Diagnosis and Treatment of Ringworm," 1881.

British Medical Journal: "The Comparative advantage of Scraping and Scarification in the Treatment of Lupus Vulgaris," 1883.

"*The Book of Health*," 1883: "The Skin and Hair."

Heath's "*Dictionary of Surgery*" (1886): "Lupus Vulgaris," "Lupus Erythematosus," "Scabies," "Elephantiasis Arabum," "Favus," etc.

Gant's "*Surgery*," 1886: "Diseases of the Skin."

Treves's "*Manual of Surgery*" (1886): "Surgical Affections of the Skin," and "Scurvy."

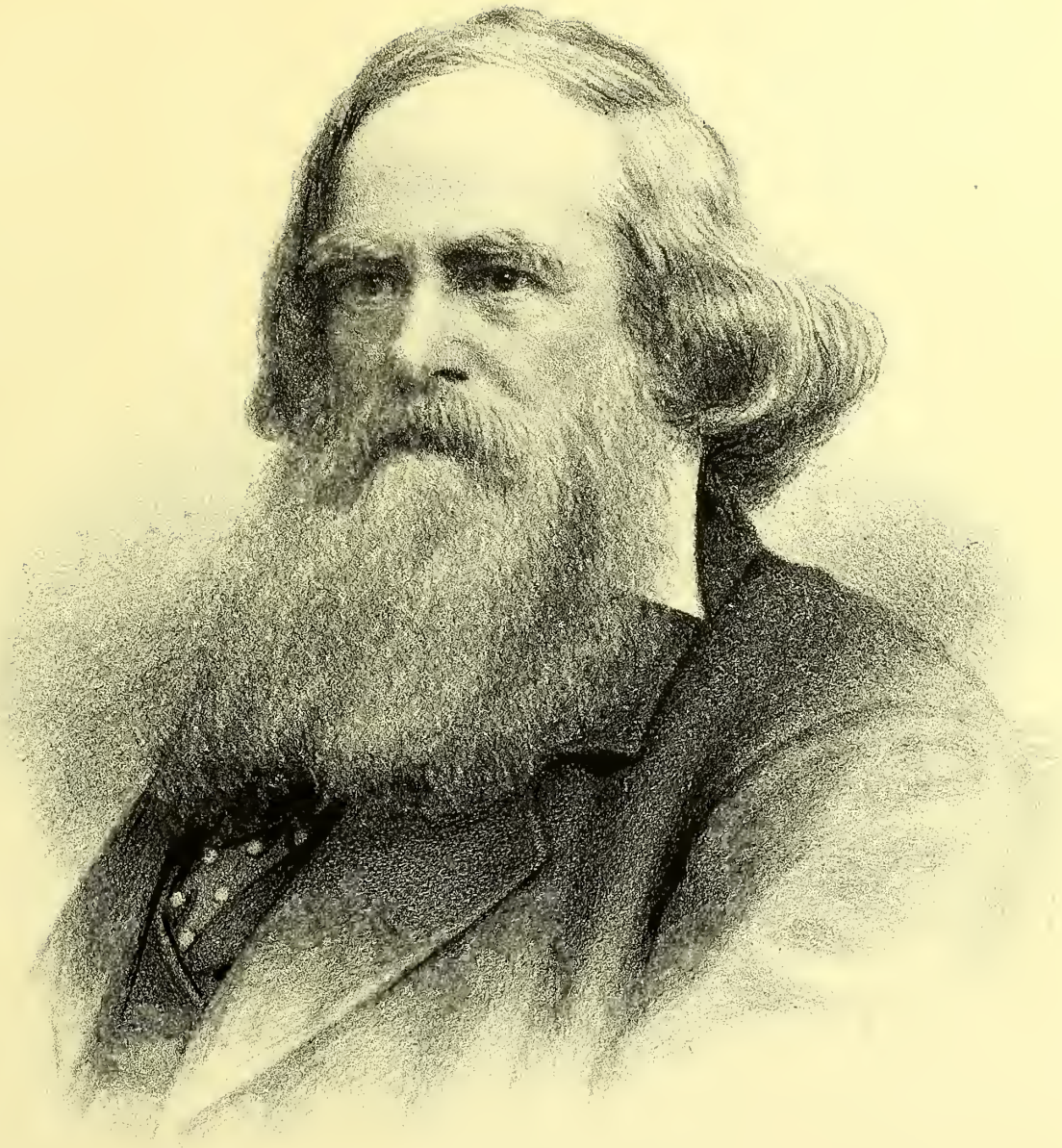
OLIVER PEMBERTON,

F.R.C.S., J.P.

OLIVER PEMBERTON was born in Birmingham on August 15th, 1825. For generations his family has been identified with all that has made Birmingham famous in the manufacture of metals and glass; and there was nothing in his early surroundings to suggest the adoption of the profession in which he has played at all times the part of one who loved both the science and art of surgery well.

Mr. Pemberton has always said that whatever desire he had to cultivate learning for learning's sake, and especially classical literature, he owed entirely to the teaching—to the mental training and encouragement—of Dr. James Prince Lee, one of the greatest, if not the greatest of schoolmasters of his day, who was for many years the presiding genius of King Edward's School at Birmingham, and who died as first Bishop of Manchester. At this school, from first to last, the master urged University study as the means of insuring young Pemberton's further progress when the proper time should come for him to go there; but there were difficulties in the way, and school was left for nearly a twelvemonth, which was wasted in waiting to see if an aptitude for business would show itself in the midst of a daily life that was all business. This taste for commercial life, however, happily did not come; but a friendship with Mr. Dickenson Webster Crompton came instead—then, in his young life, as now, in his sound old age, no ordinary example of what a high-minded surgeon should be. The intercourse with Crompton determined Mr. Pemberton's career, and, on his seventeenth birthday, he was duly apprenticed to that gentleman for the then customary period of five years. Medical students were dressers in those days during well nigh the whole time of their hospital attendance, and they became necessarily familiar with all the appliances and methods that make good the art of surgery; they learned also how to make *post-mortems*. It is not now to any great extent their own fault that they are handed to the public as finished practitioners, although possibly ignorant of the commonest details of the former, or, it may be, incapable of performing, and, perhaps, of even appreciating, the value of the latter; for they are the victims of a series of regulations, many of which have tended to weaken the compulsory learning of the practice of surgery.

After four years spent at the General Hospital in Birmingham, where Joseph



As always yours
Albert Bierstadt

Hodgson was then the greatest light, and in attending lectures at Queen's College, Mr. Pemberton—having meanwhile become an undergraduate of the University of London—entered St. Bartholomew's, where the valued introduction given by Hodgson to Burrows, Laurence, Stanley, and Paget, secured him at once much counsel as well as friendly interest. The time passed in London in 1846 and 1847 was of untold value in increasing the regard in which he held the art of surgery, and he became a member of the College in the April of 1847.

The four years next ensuing were passed as House Surgeon at the Birmingham General Hospital, and the great field of experience there was cultivated to such effect that the Governors elected him to the post of full Surgeon in 1852, at the early age of twenty-seven—a post which he holds at the present moment as Senior Surgeon, having thus for thirty-six years had rare opportunities of practising and teaching surgery.

From the first Mr. Pemberton held the opinion, very strongly, that a record of things seen, and of work done, was second in value only to the actual opportunity for experience itself. Very early this conviction developed into the desire to cultivate medical literature, and opened the way to reputation, and, beyond all, to the personal friendship of men foremost amongst those engaged in advancing the progress of surgery. Thirty years back the subject of excision of the knee, revived by Fergusson, was on its trial. Save by him, it had hardly been done in England. Mr. Pemberton performed the operation for the first time at the hospital, in the case of a boy, *æt.* twelve, in February, 1854—being left, in the consultation that was held, to adopt the alternative of excision instead of amputation, if he thought fit. The case was destined to become historical, when a second record of it was brought before the profession, under the heading of "The further History of an Excised Knee-joint in the Ungrown Subject, especially in regard to the want of subsequent development and growth in the limb." This was six years afterwards, and gave rise to an active controversy, both at home and abroad, that will be well remembered in the minds of our surgical readers, Fergusson* in his lectures, Humphry, Butcher, Price, and many others having taken part in it.

A fair consideration of the facts led Mr. Pemberton to certain conclusions affecting the operation of excision of the knee in young subjects. These were :

"Firstly. That the proceeding is liable to be attended by a want of corresponding growth in the limb subjected to operation, as compared with its fellow, the result being that ultimately the member becomes not only useless, but is an encumbrance, as it has failed altogether to grow in proportion to the general expansion of the frame."

"Secondly. That whilst we, at present, have no proof that the removal of the

* "Lectures on the Progress of Surgery," London, 1867.

epiphyses, or the failure in obtaining anchylosis, exercises any material influence on the subsequent growth of the limb, it nevertheless appears probable that adequate growth is more likely to be attained where care has been taken to remove as small a portion of the articular extremities as possible, and anchylosis has resulted."

In regard to excision of the knee-joint in adults, Mr. Pemberton came to the conclusion that those cases would be found most eligible for excision where the mischief in the bone was limited to the articular extremity, and where the soft parts had not become adherent to the parts beneath, from the presence of sinuses, or from the general effects of long continued disease. Where the disease in the bone could not be removed without the sacrifice of too great an amount, or where the soft parts around the joint had assumed an unhealthy character, amputation would be preferred, a vigorous condition of the latter structures being quite as essential to subsequent repair and well-doing as was a section through sound bone for the attainment of satisfactory osseous or fibrous union.

In May, 1857, in conjunction with Dr. G. V. Blunt, Mr. Pemberton brought out the *Midland Quarterly Journal of the Medical Sciences*, in which appeared his essay on "Melanosis," followed in subsequent numbers by both reports and papers on that subject. The publication lasted about a year and a half, and contained to the end very valuable original articles and papers from some of the most distinguished teachers of the day; but money lacked, not material, and after much earnest work, the issue was abandoned. The articles on "Melanosis" were afterwards reprinted in a volume.

Between the years 1856 and 1859 Mr. Pemberton published a series of contributions to clinical surgery in the *British Medical Journal*, amongst which may be mentioned his papers on "Lithotomy in Children," "Amputation at the Ankle-joint," etc.

His attention was next devoted very much to the disorders of the arteries, especially to aneurism and its treatment by pressure, giving rise to arterio-venous communications—Mr. Pemberton bringing the subject before the Medico-Chirurgical Society.* The case brought forward had a special interest from having been in life minutely examined by Mr. Hodgson and Professor Syme. On the same path was the successful treatment of a popliteal aneurism by a combination of pressure and flexion (*Lancet*, 1859), and the treatment of aneurism from anastomosis by excision, also published in the *Lancet*.

In 1867, Mr. Pemberton's volume of "Clinical Illustrations of various forms of Cancer," embodying personal observations derived from his own practice, was published. In acknowledging a copy of the book, Sir James (then Mr.) Paget wrote: "It is a grand book, such as no one would make unless he had cultivated good taste

* *Transactions*, 1861.

as well as good surgery. The illustrations, which alone I have looked well at, are admirable. Nothing so good has been done in surgery since poor Stanley published his labour of forty years." The publication of the "Illustrations" brought also a further recognition than this, the expressed judgment of the master of surgical pathology; for, at the instance of M. H. Lebert, in January, 1868, the diploma of foreign corresponding member of the Society of Surgery of Paris was conferred upon the author. * In this, his monumental work on Cancer, Mr. Pemberton, after carefully distinguishing between malignant and benign tumours, illustrated the various characters of the terrible disease by a minute account of no less than ninety-four cases that had come under his own observation. Each case was referred to some special form of the malady, whose particular symptoms were described, and the author gave such clinical comments as his own experience suggested, omitting all reference to the writings of others, as well as all controversial matter; for such a course was, in his judgment, more likely to lead to valuable results than the production of an ambitious treatise, filled with the arguments and opinions of others.

After a lapse of seventeen years, in his Ingleby Lecture at Queen's College, Birmingham, in 1884 (which was published in the *Birmingham Medical Review*, and the *Provincial Medical Journal*, and also in pamphlet form), Mr. Pemberton, who had meanwhile become Professor of Surgery in the College, was compelled to repeat the mournful conclusions he had laid down in his "Illustrations," which his later experience had confirmed. He had said then: "No absolute rule can be laid down in regard to the removal of cancer in the breast by an operation. The instances, however, in which extirpation by the knife will be deemed advisable can never be very numerous; for whoever has had an opportunity of watching many cases of scirrhus of the breast, can scarcely fail to arrive at the conclusion that the proceeding has hitherto contributed to the duration of life in only a very limited degree."

In 1884 he said, with Sir James Paget: "I am not aware of a single clear instance of recovery; of such recovery, that is, as that the patient should live for more than ten years free from the disease, or with the disease stationary." †

He feels himself compelled to continue to say to whomsoever it may concern: "I may promise you at most, the amelioration, the apparent removal of cancer, but I cannot, and I will not tell you I can cure it, or even that it may not recur again and again after an operation."

Professor Pemberton is convinced that the malady, in its earliest onset, is both local and constitutional—local, essentially as a result of some irritation or injury in the face of constitutional predisposition, probably hereditary; and constitutional,

* "Traité Pratique des Maladies Cancéreuses," par H. Lebert. Paris, 1851.

† Lectures by Sir James Paget, p. 645.

equally essentially when arising without known cause of any kind and in the midst of health, otherwise the most perfect. Although he would recommend an operation under certain conditions which he describes, he is far from being an advocate of indiscriminate removal of cancer of the breast. In fact he has many times satisfied himself that an operation has hastened the patient's end, by exciting a greater activity in the part primarily affected, or if not, by bringing this about by lighting up a disposition, as rapid and abundant as it is destructive, to the dissemination of similar cancerous material, both within and without the body. "Anyone," he says, "who has watched, as I have had the opportunity of watching, the conduct in this respect of melanosis must be satisfied of this being correct."

At the meeting of the British Medical Association at Birmingham in 1872, Professor Pemberton had the honour conferred upon him of being selected to deliver the Address in Surgery. Perhaps the surest proof that he had merited the distinction by working for it may be found in the words of Sir William Fergusson, in an address which he delivered on the same occasion as President of the Section of Surgery: "At our present concourse the Address in Surgery is to be given by one of the foremost of our surgical brethren of the day, Mr. Oliver Pemberton, whose name as a pathologist and practical surgeon is known wherever the history of modern surgery extends. It would therefore be as unbecoming as uncalled for were anyone in my position to encroach upon the duties which belong to a gentleman so thoroughly able to do all that has been asked of him by our Association, more particularly as most, if not all of us, are honoured visitors in that town where his laurels have been won, his fame is sacredly cherished, and his fortunes are centred."* The address, as was appropriate in the town of Freer and Hodgson,† dealt mainly with the subject of Aneurism, to which was added a consideration of median lithotomy and of stricture of the urethra.

Speaking of Aneurism, Professor Pemberton drew special attention to the feature of coagulation of the blood, which it was of the utmost importance to increase, after operation, as much as possible, by good diet and by the absence of all depressing remedial agents. He showed that the principles of treatment in the methods of flexion, compression of the sac, and manipulation, were one and the same. The object was, as in flexion, to alter the relations between the orifices of ingress and egress, and the fibrous-laminæ of the sac, which latter, becoming as it were dislocated, would protrude more or less into the stream of blood, when a fresh deposit of fibrin would occur, and so the cure would be gradually effected. "What we want," he said,

* *Lancet*, vol. ii., 1872.

† George Freer: "Observations on Aneurism." Birmingham, 1807. Joseph Hodgson: "A Treatise on Diseases of the Arteries and Veins." London, 1815.

"is a stream of blood flowing into the aneurism; that it should be more or less retarded there, and that there should be present something in the nature of a foreign body; for example, the fibrinous laminæ, on which blood would coagulate and deposit its fibrin." He held strongly that what was wanted was this deposit of fibrin rather than a coagulation of blood; and he was the first to show how it could be brought about by a combination of compression and flexion.* He also strongly entertained the opinion that compression of the sac should be more frequently resorted to.

The most recent contribution from Professor Pemberton's pen touching aneurism appeared in several consecutive numbers of the *Lancet*, on "Two Cases in which the External Iliac Artery was successfully Tied for cure of Aneurism; also on Three Aneurisms in the same Artery; and on Treatment of Gangrene after Ligature."

An interesting circumstance is interwoven with the history of the ligature of the external iliac artery, Birmingham and its hospital being the place where for the first time successfully in the world of surgery George Freer tied this vessel, his case, in 1806, just preceding Abernethy's by a few days; and, curiously enough, it had not again been performed until Professor Pemberton's case, though it has been repeated more than once successfully since.†

Professor Pemberton, it will have been noticed, became a member of the College of Surgeons in April, 1847. The lengthened London hospital practice required by the Fellowship regulations of those days made it impossible for him to seek that honour by examination, at a time when his occupations rendered it practicable, and, though he made a special appeal to the Council to be allowed to present himself, his petition was refused, the refusal being based on exclusive enactments long since removed for the benefit of the younger members of the profession. In April, 1878—just thirty-one years afterwards—the Council for the first time took advantage of their privilege, and elected, under the provisions, Sir Joseph Fayrer and the subject of this biography to the honour of the Fellowship, a distinction that has also been conferred on Professor Huxley and others. In July, 1885, Professor Pemberton was elected to a seat on the Council.

Probably no circumstance points more clearly to the position of a member of the profession than the character and extent of his friendships within the ranks of the profession itself. It is interesting to note that almost all the intimacies that have proved of value to Professor Pemberton have been brought about through the cultivation of the literature of surgery. His introduction to Professor Syme and to his illustrious son-in-law, Sir Joseph Lister, arose through the first instance of external urethrotomy being performed in Birmingham in 1875. He was also brought into communication with Sir Spencer Wells on the radical cure of Hernia; with Sir

* *Lancet*, vii. (1859), p. 232. † Mr. Bartleet has had two cases.

William Fergusson, with Butcher, Keith, Page, Jones, and Mackenzie, on Excisions of the Knee; and with Jolliffe Tufnell on Aneurism. The same remark applied to the men of his own district—Clements of Shrewsbury, Carden of Worcester, and Symonds of Oxford, all now dead—with whom he preserved the most intimate social as well as surgical relations.

Very few men have had more experience in medico-legal cases than Professor Pemberton. From the date of Palmer's trial for the murder of Mr. Cook, in 1856, at which he gave anatomical evidence as to the state of the spinal cord in the murdered man, until the present time, few assizes have been held within fifty miles of Birmingham at which he has not been present as a surgical expert, either to defend a medical brother, or to bear evidence as to the extent and character of accidental injuries. Until his resignation a few years since, the late coroner, Dr. Birt-Davies, during the long tenure of his appointment, invariably referred all cases involving criminal circumstances to Professor Pemberton's examination and judgment, and many and various, and of high interest, have been the experiences that he has had of the Bench and Bar during that period. The vexed question as to the proper tribunal for assessing damages in railway accident claims, led to his being selected by the railway companies to give evidence before the Committee of the House of Commons, the recommendation being published in 1870.*

In the early part of the year 1875, when the Birmingham Medical Institute was founded, for the association of the various Medical Societies of the Midland district, Professor Pemberton took a prominent part in a movement that led to much question and comment in the *Lancet* and other medical papers. When the first list of subscribers to the new Institute was read over at a meeting of the promoters, it appeared that one of the homœopathic practitioners of Birmingham had tendered a donation, which, despite protest, was accepted; and, subsequently, the committee elected thirty-four members, including four homœopaths. Against this proceeding Professor Pemberton made an energetic stand, claiming that the committee should not have acted in so important a matter until the sense of the profession of the surrounding district had been taken on the question. In order that such an opinion might be got, he went to the trouble of addressing to the 1,400 medical practitioners within fifty miles of Birmingham, a copy of the correspondence and comments which had appeared in the *Lancet*, together with a declaration that the signatory was of opinion that none should be elected members of the Institute, however legally qualified, "so long as they assumed a mode of *practice* and maintained a *name* calculated to mark them from the general body of the profession." The result was as Professor Pemberton

* Report of the Select Committee on Railway Companies and Claims for Compensation for Accidental Injuries.

anticipated; of the 460 medical men who replied, 436 signed the declaration against the homœopaths, and 19 only were in their favour, while 5 preferred to remain neutral. At the first annual meeting of the Institute, however, the disputed election was confirmed, and as a result Mr. Edwin Chesshire and some others withdrew their names from it altogether.

At the opening of the Medical Classes at Queen's College, Birmingham, in October, 1881, Professor Pemberton delivered a striking address upon "The Present Means for the Cultivation of Medical Science" in that important centre. He took a gloomy view of the progress of medical education, observing that during the last thirty-four years he was bound to admit that a majority of the students whom he had had a share in training had gone forth lamentably ignorant of the practical duties they were about to undertake. In other words, their experience was likely to have no other source than that arising from a public too confiding in the gratuities of academic or university records. "This," as the *British Medical Journal* observed, "was an emphatic way of indicating the strong opinion that students should be brought face to face with medicine as a practical art; that a period of apprenticeship should be instituted, and the period of hospital dressing lengthened—an opinion well worthy of mature consideration, but one which would certainly carry with it the necessity of the addition of another year to the medical curriculum; so that no student should be able to begin to go up to pass examination until the close of four *bonâ fide* years spent in medical study after the period of registration, as is the case in France and Germany, where no student passes until the close of his fifth year from the date of studentship." It was a pleasant opportunity for Professor Pemberton to point, as an excellent means of this practical training, to the magnificent hospitals of Birmingham, with their large number of patients and great variety of cases, supplemented by the teaching of the Mason Science College, and by other advantages to be found in the neighbourhood. "And now, gentlemen," he said, "I hope I have made clear to you that you are students of medicine in no common spot, and that your opportunities of acquiring information for reaching the standard of the day are comprehensive and complete."

No hard work in the medical profession can be accomplished without vigorous health, and this can alone be assured by a due mixture of work and play. Happy is the man who has some other side to his life beyond the mere calling by which he lives and prospers. It is not the yearly holiday that brings rest and refreshment to mind and body so much as the few hours weekly snatched from the inevitable round of daily work. What nearly proved to Professor Pemberton a fatal illness within a short time of the commencement of his career—due solely to a neglect to seek such relaxation—led him to adopt the plan of taking the whole, or indeed as much as he

could get, of a Saturday, according to exigencies, for recreation in the country. A skilled angler, from the salmon and trout to the grayling and pike, according to the season—in summer or winter—indifferent to the weather, his ways and his journeys on these days, *sacrum piscatoribus*, are as well-known to his friends and patients as are his habits of early rising and absolute punctuality in work at all other times.

Besides being the Senior Surgeon to the General Hospital, the subject of our memoir is Professor of Surgery in the Queen's College, and a Member of the Council as Trustee of the Mason Science College. As an operating surgeon and as a consultant, he has long enjoyed a foremost rank amongst his professional brethren in the midland counties, and it is little to say of his honourable instincts that the many around him whom he has helped to teach, know that their reputation is secure, under any circumstances, in his hands. Beyond these strictly professional lines, he has felt that he could not remain indifferent to giving such aid as was within his power to further the progress of the great community in the midst of which his life has been passed, by joining the Town Council and taking part in the Health and Water Committees. He is also on the Commission of the Peace for the county of Warwick.

Professor Pemberton married in 1851, Anna, the only child of the late Mr. Daniel Whittle Harvey, M.P. for Colchester and Southwark, and Chief Commissioner of Police for the City of London, well known as one of the eloquent speakers of his time, by whom he has six surviving children, three sons and three daughters.

BIBLIOGRAPHY.

"On Melanosis" (Observations on the History, Pathology, and Treatment of Cancerous Diseases), 8vo. London, 1858.

"On Excision of the Knee-joint, illustrating the Principal Complications which are likely to arise after the Performance of that Operation, and especially the want of subsequent Development and Growth in the Limb of the Young Subject," 8vo. London, 1859.

"On the Radical Cure of Reducible Inguinal Hernia," 8vo. London, 1859.

"Clinical Illustrations of various forms of Cancer, and other Diseases likely to be Mistaken for them, with especial reference to their Surgical Treatment," imp. 4to. London, 1867.

"Address in Surgery, delivered at the Annual Meeting of the British Medical Association, held at Birmingham, August 5th, 1872," 8vo. London, 1872.

Selected Contributions.

British Medical Journal: "Lithotomy in Children;" "Fissured Fracture of Cranium," "Amputation of the Ankle-joint;" "Muco-cutaneous Outgrowth;" "Excision of the Knee-joint;" and other clinical contributions, 1856-59; "On Ligature of the Common Femoral," 1875.

Midland Quarterly Journal of the Medical Sciences: "Reports on the Progress of Surgery," 1857 and 1858; "Impermeable Stricture of the Urethra treated by Perinæal Section," 1858.

Medico-Chirurgical Transactions: "On a case of Aneurismal Varix in the upper part of the Thigh, following the employment of pressure for the cure of an Aneurism of the Posterior Tibial Artery," 1861.

Lancet: "Aneurism of the Popliteal Artery successfully treated by Flexion and Compression," 1859, vol. ii.; "On the Treatment of Aneurism from Anastomosis by Excision," 1860, vol. i.; "Extensive Laceration of the Uterus between fourth and fifth months of Pregnancy" (Medico-Legal Investigation), 1860, vol. ii.; "On Traumatic Destruction of the Urethra, and its Relief by a suitable Apparatus in the Perinæum," 1861, vol. i.; "Homicide by Manual Strangulation, causing Fracture of the Aicoid Cartilage," 1869, vol. i.; "Excision of the Knee—age for Operations, &c.;" "Treatment of Compound Fracture of the Patella by Excision," 1870, vol. ii.; "Ligature of the External Iliac Artery by an Antiseptic Material for the cure of an unusual number of Aneurisms," 1876, vol. i.; "On Two Cases in which the External Iliac Artery was successfully tied for the cure of Aneurism, with Observations on the Formation and Growth of a solid Fibrinous Tumour in the Sac; also on the Occurrence of three Aneurisms in the same artery, and the Treatment of Gangrene after Ligature," 1877, vol. ii.; "On the Treatment of Organic Stricture in the Urethra, especially by the systematic use of Tapering Metallic Dilators," 1878, vol. i.; "Loose Bodies in the Knee-joint," 1883, vol. i.; "Foreign Bodies in the Air-passages," 1884, vol. i.

Medical Times and Gazette: "On Amputation by Rectangular Flaps."

Birmingham Medical Review: "On the Present Means of the Cultivation of Medical Science in Birmingham," Oct., 1881; "On the Operative and General Treatment of Cancer in the Female Breast" (Ingleby Lecture, 1884), Jan., 1885.

JAMES BELL PETTIGREW,

M.D., LL.D., F.R.S., F.R.C.P.

JAMES BELL PETTIGREW, Laureate of the Institute of France, Professor of Medicine and Anatomy, and Dean of the Medical Faculty in the University of St. Andrew's, is a native of Monkland, Lanarkshire, Scotland. He is related on his father's side to the late well-known Dr. Thomas J. Pettigrew, F.R.C.S., author of "Bibliotheca Sussexiana," "Encyclopædia Egyptiaca," "Medical Portrait Gallery," etc.; and on his mother's side (Mary Bell) to the famous Henry Bell, the designer and builder of the original *Comet* steamship, and the accredited parent of steam-navigation in Europe.

Professor Pettigrew's boyhood was characterized by great physical vigour, and an unusual flow of animal spirits, and he entered enthusiastically into all kinds of field and other sports, particularly those requiring agility, courage, and endurance. But, while devoted to every form of pastime, he was not averse to serious pursuits, and read and experimented largely, and to good purpose, at a very early age. The books which delighted him most were works on travel and natural history, and these he devoured with all the eagerness of an enthusiastic and earnest nature. His experiments were chiefly of a mechanical kind. He constructed models of windmills, waterwheels, tilt hammers, rolling mills, and engines, and in this way educated, unconsciously, both his head and his hands. In his case, "the child was father to the man," as regards a love of nature, a love of books, and a love of experimentation. Throughout his whole career he has been an experimenter. Avoiding the beaten track, from an innate love of discovery, he has worked in the unexplored realms of science, and there he has written his name in enduring characters.

Professor Pettigrew was educated at the Free West Academy of Airdrie, and at the Universities of Edinburgh and Glasgow. At school he took matters comparatively easily, but, nevertheless, succeeded in carrying off a considerable number of prizes. At Glasgow University he studied Arts for a period of five years (from 1850 to 1855), and worked hard at Latin, Greek, logic, moral philosophy, mathematics, and natural philosophy, the two last being favourite subjects. He, however, found time during his Arts course to indulge in a large amount of desultory reading, and to cultivate music, drawing, and art generally. At the University of Edinburgh he studied Medicine from 1856 to 1861, when he took his degree of Doctor of Medicine. During his medical course he worked steadily, but not excessively.

Yours Sincerely
J. Bell Bultigrew

It was in the third year of his medical studies that Professor Pettigrew came prominently to the front. In this year (1858-9) the late Professor Goodsir, the most philosophic of British Anatomists since the time of the great John Hunter, gave out, as the subject of competition for his Senior Anatomy Gold Medal, the "Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart." This subject, admitted on all hands to be one of extreme difficulty, had remained an anatomical puzzle for upwards of two centuries, and formed, in the eyes of many, the Gordian knot in anatomy. By a lucky generalization, Professor Pettigrew hit upon the law which regulates the distribution of these involved and intricate interlacing fibres. The manner in which this interesting discovery was made is curious and instructive. While engaged in dissecting the heart, Professor Pettigrew happened, one day after dinner, to roll his newspaper obliquely into a cone, and was much surprised to find that the reading or lines of the newspaper assumed spiral forms, the spirals on the outside of the cone being the opposite of those on the inside, and all being graduated as regards direction, an arrangement in every respect identical with that revealed by his dissections. He suddenly exclaimed, "Eureka!" His favourite sister, who was sitting beside him, on inquiring the cause of the sudden excitement, was informed, "the structure of the heart is now an open secret."

Prior to his discovery, the descriptions given of the arrangement of the muscular fibres of the heart were hopelessly conflicting, and he has the merit of being the first to introduce law and order, where, previously, confusion had reigned. He succeeded in demonstrating that the ventricular portion of the vertebrate heart is constructed according to strict mathematical principles, and forms a mathematical problem of great complexity and extreme beauty. By the aid of pen, pencil, and scalpel, he was able to prove that the muscular fibres of the ventricles are arranged in the form of two double conical screws, which are continuous at base and apex, and which intersect and interlace in every direction; one screw winding from right to left outside the ventricles, and from left to right inside the ventricles; the other from left to right outside the ventricles, and from right to left inside the ventricles. He further showed that the fibres in their various convolutions form seven different layers, each layer crossing more and more obliquely as the central layer is reached, and constituting *a spiral figure-of-8 looped arrangement*, which had not been suspected, and which fully accounts for the rolling movements of the heart within the chest, and for the spiral impulse given to the blood when it leaves the heart.

For this great achievement he was awarded the Senior Anatomy Gold Medal of the session 1858-9, amid quite a storm of applause on the part of his class-mates. Professor Goodsir, usually reserved and silent, greatly commended the dissections, drawings, and descriptions, and the discovery was considered so important that

Professor Pettigrew (while yet a medical student) was invited by the Royal Society of London, to deliver the Croonian Lecture for the year 1860, and to take for his subject the fearfully and wonderfully made ventricles of the heart, the structure of which he had been the first to successfully demonstrate. The lecture, amply illustrated by drawings, models, and dissections, was a distinguished success, and was awarded in due course a place in the *Philosophical Transactions* (volume cxxiv., pp. 445, 500).*

The dissections, upwards of 100 in number, were especially admired, and are still to be seen in the Anatomical Museum of the University of Edinburgh, where they are carefully preserved. Professor Pettigrew's next successful effort was in the class of Medical Jurisprudence, where he carried off the annual Gold Medal (1860) for an essay "On the Presumption of Survivorship." This paper was published *in extenso* in the *British and Foreign Medico-Chirurgical Review*, for January, 1865, and met with a cordial reception, being favourably reviewed by the medical, law, and other journals.

On graduating in Medicine at Edinburgh University in 1861, Professor Pettigrew selected for his inaugural dissertation a most abstruse and difficult subject—viz., "The Ganglia and Nerves of the Heart, and their connection with the Cerebro-spinal and Sympathetic Systems in Mammalia" (*Proceedings* of the Royal Society of Edinburgh, 1865). This dissertation was accompanied by upwards of fifty remarkably minute and delicate dissections, and secured for him a Thesis Gold Medal, the highest honour the University of Edinburgh confers. These intricate and gossamer-like nerve-dissections of the heart are preserved in the Anatomical Museum of the University of Edinburgh, and are, like his dissections of the muscular fibres of the ventricles, unequalled for delicacy of manipulation and finish.

To quite exceptional proficiency in anatomy and physiology, Professor Pettigrew added social qualities which made him a universal favourite at the Edinburgh University. His class-mates testified their appreciation of his many good qualities by electing him President of the famous Royal Medical Society of Edinburgh, a position of great honour and one eagerly coveted by all Edinburgh medical *alumni*, the society being at once the oldest and most important of its kind in Britain.

The University of Edinburgh, always prolific in great teachers, was never more spendidly dowered than when Professor Pettigrew was a student (1856 to 1861). There was not a weak link in the brilliant chain of its professors. The university and extra-mural teachers naturally incited each other, and the result was a great wave of discovery and progress, accompanied by a robust intellectuality felt in every department of Medicine. The benefits accruing from this wonderful combination of talent and intellectual power cannot be overestimated. The students, stirred

* The *London Review* for July 1886 spoke of this essay as "unquestionably the most accurate and elaborate which has yet appeared in any language."

in turn by the enthusiasm which animated their teachers, in many instances became original investigators and thinkers of a high order. The cycle of great teachers produced a cycle of great students, a large number of whom are, at the present day, professors in their *alma mater* and elsewhere, with reputations scarcely inferior to those of their masters.

On leaving the University in 1861, Professor Pettigrew became Professor Syme's House Surgeon in the Royal Infirmary of Edinburgh, an appointment which he held with great satisfaction and profit for one year. Infirmary life had many attractions. It was a very hard life as far as work went. There was literally no rest night nor day. In his capacity of Resident Surgeon Professor Pettigrew had to attend all the cases of accident received into the Infirmary four days in each week, and had charge of eighty-four beds. He had under him a full complement of day and night nurses, a supernumerary or head man, and twelve student dressers. Still, with all these aids, the work was always very heavy, as he dressed personally all primary amputations, set fractures, performed minor operations, prepared cases for clinical lectures, and recorded the progress of cases in the clinical journals. It was during Professor Pettigrew's residence as House Surgeon that the deplorable railway accident at Winchburgh, near Linlithgow, occurred. It, moreover, took place on one of his nights for receiving patients. The injured began to arrive at the Infirmary at about 10 o'clock p.m. The Surgical and Medical Staff worked from 10 p.m. till 7 a.m. without once drawing rein, and there were many major operations and several deaths during the night. While the Infirmary duties were numerous and onerous, and, at times, pregnant with anxiety, there were nevertheless countervailing advantages. Much practice of the very best kind was seen, valuable experience gained, and more or less confidence acquired.

It was during the period when Professor Pettigrew was Surgical Dresser and Resident Surgeon that Professor Syme performed his first excisions of the tongue, and some of his most daring operations for abdominal aneurism. It may interest the profession to be told that Professor Syme, on the eve of a great operation, was always more or less nervous, and occasionally requested visitors to withdraw from his retiring-room, in order that he might have a few moments of comparative quiet before tackling his difficulties. When, however, he appeared in the operating-theatre every trace of nervousness had disappeared. Then he was a man of iron. The hand and the knife moved as steadily as if impelled by machinery. He was during his operations perfectly collected, and, as a consequence, everyone about him was calm.

To Professor Syme, as it turned out, Professor Pettigrew owed his subsequent advancement as Pathologist to the Royal Infirmary of Edinburgh, and Curator of the

Museum of the Royal College of Surgeons of Edinburgh. He strangely enough became Resident Surgeon to Professor Syme by a mere accident. He had been devoting himself to anatomy rather than surgery, and had been selected by Professor Goodsir to go to Germany and study continental methods with a view to becoming one of his (Goodsir's) Demonstrators. As, however, Professors Goodsir and Syme were fast friends, and the latter had been disappointed in his Resident Surgeon, they requested Pettigrew to fill the gap. This trifling incident no doubt completely changed his prospects and career. On Professor Pettigrew accepting the office of Resident Surgeon, Professor Syme said to him in his quiet way, "Now, whatever you do in after life, you will never have reason to regret having taken this step." He there and then extended the right hand of friendship, and it was never withdrawn so long as he lived.

In 1862, Professor Pettigrew obtained, chiefly through the kind offices of Professors Goodsir, Syme, and Sharpey, the post of Assistant Curator of the great Hunterian Museum at the Royal College of Surgeons of London. He entered upon his new duties full of enthusiasm and hope. The first thing he did was to put the tangled and not over savoury work-rooms of the museum in thorough working order. This was no easy task, as they contained thousands of specimens preserved in spirits and otherwise, many of them giving off semi-putrid vapours, alike disagreeable and dangerous, if breathed consecutively for any length of time. In order to remove these fœtid emanations he kept the windows of the work-rooms open night and day, and even sat and dissected at the open windows, preferring draughts and occasional colds to constant exposure to blood-poisoning. The work-rooms once in order, he set himself vigorously to discover new methods of injecting, dissecting, preserving and displaying anatomical and other specimens, and in a comparatively short time succeeded in introducing numerous important reforms and improvements in the art of preparation-making. He may be said to have inaugurated a new era in all kinds of museum-work. With him originated the elaborate and highly artistic dissections which are at once the wonder and pride of British anatomists. In these dissections, the various tissues and even the most delicate blood-vessels and nerves are all accurately in position. Professor Pettigrew, by patient, laborious, and loving work, contrived to give to each structure its due prominence. To him the hard and soft tissues of an organized being had each a peculiar beauty, and he was careful never to sacrifice one to the other, unless absolutely compelled to do so. Regarding the animal organism as a perfect whole, his chief delight was to exhibit nature as she is, and he had no patience with the crowd of careless dissectors who hack and hew at an animal, and so destroy and distort its beautiful proportions. To him the several parts of an animal, and even of a

plant, were as the chords of a concerted harmony, the several scenes of a play, or the component parts of a great poem. In the details of structure, his artistic eye never failed to perceive the whole. In order to obtain his brilliant results, he had recourse to several highly ingenious expedients. Thus, instead of injecting anatomical specimens when heated and dissecting them when cold, he injected them when cold, and employed heat in finishing them. The gain was obvious. Specimens when injected warm, invariably shrink on cooling, and present a faded appearance; specimens prepared according to Professor Pettigrew's methods on the other hand retain their freshness or bloom, so to speak. Among the cold injections employed by him were coloured plaster of Paris, white of egg, and various cellular vegetable products.

Professor Pettigrew designed and executed the major portion of the beautiful series of dissections mounted in coloured plaster of Paris, and displayed in flat capsules for examination purposes, at the Royal College of Surgeons of England. For these he received a special vote of thanks from the Council of the College. He also designed and executed a large number of the great and unique series of dissections of the muscles, blood-vessels, nerves, ligaments, etc., of the human body, which are now being completed at the Hunterian Museum (London), according to his methods, by his old assistant and pupil, Mr. William Pearson.

Professor Pettigrew laboured in the Hunterian Museum for five years—viz., from 1862 to 1867, and during this period he added something like six hundred finished dissections, injections, and casts to that invaluable and wonderful collection. These, have certainly never been surpassed for beauty, and they will bear favourable comparison with all known works of a similar character, whether at home or abroad. He also at this period made the acquaintance of the leading physicians, surgeons, and scientists of the metropolis.

In addition to ordinary museum-work, Professor Pettigrew undertook (1862 to 1867), several original and laborious investigations. Thus he produced a memoir "On the Valves of the Vascular System in Vertebrata," which was published in the *Transactions* of the Royal Society of Edinburgh (vol. xxiii., pp. 761-805). This memoir, profusely illustrated, was based upon a very remarkable series of dissections which are preserved in the Hunterian Museum. He also produced memoirs "On the Muscular Arrangements of the Stomach and Bladder," the arrangements of the muscular fibres in those viscera, as he pointed out, greatly resembling those met with in the heart, where the fibres, as explained, are disposed in *figure-of-8 spiral loops* which cross and overlap to form layers, having different directions. These memoirs, which were based upon exquisite dissections, also preserved in the Hunterian Museum, appeared in the *Proceedings* of the Royal

Society (1867), and in the *Philosophical Transactions* (vol. clvii., pp. 17 to 49).* Again, Professor Pettigrew produced (1867) the first of his great memoirs on the mechanism of flight—viz., that "On the Mechanical Appliances by which Flight is attained in the Animal Kingdom," published in the *Transactions* of the Linnean Society (vol. xxvi., pp. 197-277). This memoir, illustrated by four beautiful plates, and based upon numerous intricate dissections and a very large number of experiments with natural and artificial wings, attracted, if possible, a greater share of attention than any of its predecessors. In it he showed that the bones of the wing of the bird and bat are twisted upon themselves, and spirally arranged with reference to each other, so that *they form double or figure-of-8 curves* in the acts of extension and flexion, a result to which the oblique spiral arrangement of the muscles of the wing contributes. He, in fact, proved that the wing is a screw *structurally*, and that it becomes a screw *functionally*, when it is made to twist and untwist, and to reciprocate in the act of vibrating. He attached special importance to the flexibility and mobility of the wing, these properties enabling the pinion to change its shape and to reverse and reciprocate with great rapidity, and in such a manner as to admit of its alternately seizing and dismissing the air during the down and up strokes. The natural wing, and the artificial wing properly constructed, are, as he demonstrated, thrown into *double curves or undulations*, in the act of vibrating, a circumstance which enables the wing to extract from the air a maximum of buoying and propelling-power with a minimum of slip. The double curves into which the wing is thrown in action, not only admit of its reversing suddenly and without dead points at the end of the down and up strokes, but also of its utilizing air-currents whether natural or induced—*i.e.*,

* The subjoined epitome of Professor Pettigrew's views on the Structure of the Bladder and Prostate occurs in the *Journal of Anatomy and Physiology*, vol. i., p. 150:—"J. B. Pettigrew gives the following results at which he has arrived by his exquisite dissections of the Muscular Fibres of the Bladder and Prostate (*Proc. Royal Soc.*, xv., 244). The muscular fibres of the bladder are arranged spirally, forming figure-of-8 loops, the superficial more longitudinal or drawn out, the deeper more circular or flattened. They are in four sets—an anterior and posterior, and a right and left lateral the latter accessory, and less fully devoloped. The figures are arranged in seven strata—three external, three internal, and a middle, pursuing well-marked directions in each. The external and the internal are the most oblique; their obliquity diminishes towards the central stratum, which is formed by the blending of their terminal or transverse portions. A close analogy is thus traced between the disposition of the muscular fibres of the bladder and those of the heart, as described by Pettigrew in *Philos. Trans.*, 1864; and he hints at a similar structure in the stomach and uterus." It should be stated here that the late Professor Allan Thompson, of Glasgow University, was in the habit of carefully studying Professor Pettigrew's dissections of the muscular fibres of the heart, stomach, bladder, etc., and that he was permitted by Professor Pettigrew to employ his drawings, (in some instances before they appeared in his own memoirs), in illustration of "Quain's Anatomy." But from later editions of that work it would appear that an incorrect inference may be drawn that Professor Allan Thompson, rather than Professor Pettigrew, was the actual discoverer.

produced by the action of the wing itself. The wing, as he explained, can operate effectively on perfectly still air, or it can avail itself of existing air-currents, or what is still more remarkable, it can produce the whirlwind which is to elevate and carry it forward. He also insisted on the wedge and kite action of the wing, and showed by experiment that the wing, in progressive flight, advances both when it rises and falls. In this memoir (1867), he developed his remarkable and now famous *figure-of-8 or wave theory of flying*, proving, by ingenious arrangements, that the margins of the wing, in extension and flexion, change their planes and form double and opposite curves; the wing itself, when it is made to vibrate, reciprocating and forming figure-of-8 loops when the flying animal is fixed, the figure-of-8 loops when the flying creature is progressing at a high speed being opened out to form a *waved track*.

The views discussed in this memoir were enunciated in a crowded evening lecture at the Royal Institution of Great Britain, and published in the *Proceedings* of the Institution of the 22nd of March, 1867. It was shortly afterwards translated into French, and appeared in the *Revue des Cours Scientifiques de la France et de l'Étranger*, of the 21st of September, 1867. The figure-of-8 theory of flying was warmly espoused by Professor E. J. Marey, of the College of France, in the beginning of 1869, some two years after it was propounded by Professor Pettigrew, and is now universally accepted as the only one capable of explaining all the intricacies and beauties of wing movements.* Professor Pettigrew's views may be found at length in the sources indicated here.

The figure-of-8 and wave theory of flying, concerning which so much has been said and written, was the outcome of quite a gigantic series of observations, dissections, and experiments, and has recently received a striking confirmation from the researches of Mr. Fred. W. Breary, who has succeeded in making models fly by the aid of flexible, undulating, or double-curve figure-of-8 surfaces, similar to those originally employed by Professor Pettigrew.† It, moreover, was the outcome, indirectly, of all Professor Pettigrew's previous dissections and discoveries in the nerves and valves of the heart, in the muscles of the heart, stomach, and bladder, and in

* Professor Marey having followed Professor Pettigrew on the latter's own lines, some authors have erroneously supposed that Marey and not Pettigrew was the discoverer of the figure-of-8 movements made by the wing in flight. The following acknowledgment of priority by Marey himself will set this matter at rest. In the *Comptes Rendus* of May 26th, 1870, page 1093, he writes: "I have ascertained that, in reality, Mr. Pettigrew has been before me, and represented in his Memoir the figure-of-8 track made by the wing of the insect, and that the optic method to which I had recourse is almost identical with his. . . . I hasten to satisfy this legitimate demand, and I leave entirely to Mr. Pettigrew the priority over me relatively to the question as restricted."

† These models, it should be observed, do not carry their own motors.

nerves, muscles, and bones, generally. The figure-of-8 and spiral factors had long been known to him as playing an important part in organic growth and action, and he was the first to demonstrate that without them continuous movements in the higher animals are impossible. According to him, fishes swim, birds fly, and bipeds and quadrupeds walk, by spiral and double-curve figure-of-8 movements, a fact which he has been able to illustrate by the aid of numerous ingeniously contrived models.

From the foregoing it will be evident that, while Professor Pettigrew's researches and experiments embraced every possible kind of flight, they were not confined to this form of locomotion. On the contrary, he conducted an exhaustive and expensive series of experiments with artificial fish-tail, elastic screw, and other propellers, with a view to improving the propulsion of steam ships. In these experiments he employed a beautifully constructed steam model, expressly built for him in Glasgow, on the most approved Clyde lines. These experiments with elastic fish-tail, and other propellers, and with flexible wave and other wings, have supplied the material for several patents. Since he first directed attention (1867) to the screw configuration and flexible properties of natural wings, and more especially since his introduction of *artificial elastic wings and screws*, a great revolution has taken place in the construction of flying models.

The constant application necessary to the production of the memoirs referred to, the large number of elaborate dissections required for the Hunterian Museum, and the want of fresh air and exercise consequent upon city life, proved too much for Professor Pettigrew's health, and he resigned his museum appointment towards the termination of 1867, greatly to the regret of anatomists, physiologists, and the medical profession generally.

Broken in health, he betook himself to the genial climate of the south of Ireland, where he remained till 1869, at which date he was made a Fellow of the Royal Society of London. During his enforced retirement he returned with avidity to his field and other sports, particularly riding, coursing, and fishing. He also experimented largely on the subject of artificial flight with steam models and artificial wings of his own construction. Finding, however, that in Ireland his models were not made with that precision which his experiments demanded, he went to Scotland (Glasgow), where he had fresh models made, and experimented for six months consecutively, at great expense and very considerable personal inconvenience. The results obtained from these, and similar experiments made in London some years previously, were eminently satisfactory and encouraging, and served to convince him that artificial flight is certainly attainable. Aërial navigation, according to him, is simply a question of time, money, and mechanical ingenuity. While Professor Pettigrew has not hitherto succeeded in producing a fully equipped

flying-machine, he has nevertheless gone far towards it. He has made no fewer than six highly ingenious and successful working models, each model being a decided advance on its predecessor. His last model (1887), stands ten feet high, has wings thirty feet long, and weighs eighteen stones or 252 pounds. It is driven by high pressure steam by a direct piston action, and can elevate and propel itself for short distances. This is an unlooked for result, and effectually disposes of the theory that nature has fixed the limits of flight in her largest flying birds, none of which weigh more than two stones or twenty-eight pounds. It would seem as if the era of the flying-machine had all but arrived, and when it does arrive, it will be found that no one has contributed more to its advent by original observation and experiment than Professor Pettigrew. His researches and writings, extending over a period of more than twenty years, may very fairly be said to form the nucleus of all modern attempts at aërostation, and to him more particularly is to be traced the popular as well as the scientific development of the very knotty problem. No one who is not personally acquainted with Professor Pettigrew can have any idea of the vast amount of time and energy devoted by him to all kinds of locomotion, but more especially to swimming and flying, natural and artificial. Neither can they form any adequate conception of the vast accumulations of manuscript, drawings, preparations and mechanical appliances on these subjects now in his possession.

In the autumn of 1869, Professor Pettigrew being convalescent, and vacancies having occurred for a Curator to the Museum of the Royal College of Surgeons of Edinburgh, and for a Pathologist to the Royal Infirmary of Edinburgh, he presented himself as a candidate, and was appointed to both offices, chiefly through the cordial support of his old master, Professor Syme, who acted a more than friendly part on the occasion. At the Royal Infirmary of Edinburgh Professor Pettigrew gave daily demonstrations in Morbid Anatomy to large classes of students. His popularity with students may be inferred from the fact that, during the five years (1870 to 1875) in which he acted as Pathologist, his class-roll swelled from 156 to 288.

Professor Pettigrew, while engaged as Pathologist and Museum Curator, never lost sight of his flight researches and experiments, and in 1870 produced an elaborate memoir, entitled "The Physiology of Wings: being an Analysis of the Movements by which Flight is produced in the Insect, Bat, and Bird." This exhaustive treatise, illustrated by six plates and a large number of wood-cuts, was published in the *Transactions* of the Royal Society of Edinburgh (vol. xxvi., pp. 321 to 446). His "Flight Memoirs," it may be remarked, extend to some 220 pages quarto, and are illustrated by close upon 200 original engravings and wood-cuts.

In the year 1872 Professor Pettigrew gave a course of lectures to the Fellows of the Royal College of Surgeons of Edinburgh, on "The Physiology of the Circulation

in Plants, in the Lower Animals, and in Man." These lectures were largely attended, not only by the Fellows of the College, but also by Professors from the University, and the medical profession generally. They were profusely illustrated by diagrams, specimens, and experiments, and were published as delivered in the *Edinburgh Medical Journal*, *Lancet*, and other medical papers. In them Professor Pettigrew first promulgated his theory of the double action of muscle, and maintained that all muscles (voluntary and involuntary) have the power not only of actively contracting or shortening, but also of actively expanding or lengthening. In the same year he was made a Fellow of the Royal Society of Edinburgh, and also of the Botanical, Harveian, and Medico-Chirurgical Societies. In 1873 he was elected a Fellow of the Royal College of Physicians of Edinburgh, and appointed Examiner in Physiology to the College. He also became the Lecturer in Physiology to the Royal College of Surgeons of Edinburgh. On assuming the duties of Teacher of Physiology, he chose as his opening address, "The Relation of Plants and Animals to Inorganic Matter, and the Interaction of the Vital and Physical Forces." The address was published in full in the *Lancet*, of the 15th of November, 1873, and subsequently in a separate form.

In the year 1873, Professor Pettigrew gave to the world (*International Scientific Series*, Vol. vii.) his work on "Animal Locomotion, or Walking, Swimming, and Flying," the most popular and best-known of all his writings. The volume had a large circulation, and was speedily translated into French, German, and other languages. Professor Pettigrew, relying on the accuracy of his experiments with natural and artificial wings often repeated, ventured in this work upon untrodden ground and gave some entirely original, novel and highly interesting explanations of the manner in which flight is produced. A keen controversy followed, in which the physicists and mathematicians of Cambridge, the Continent, and America joined; but, as time advanced, Professor Pettigrew's views were gradually adopted. The work was on the whole very favourably reviewed.*

In 1874, Professor Pettigrew was awarded the Godard Prize of the French Academy of Sciences, for his anatomical and physiological discoveries, and was made a Laureate of the Institute of France.

In that year also he undertook a tour in France, Germany, Austria, and Belgium, for the purpose of inspecting the great anatomical, physiological, and pathological laboratories of the Continent, and became personally acquainted with many of the *savants* with whom he had corresponded and exchanged memoirs. In 1875 Professor Pettigrew was appointed to his present Chair of Medicine and Anatomy in the University of St. Andrew's, the oldest and in some respects the most celebrated of

* *British and Foreign Medico-Chirurgical Review*, April, 1874; *Edinburgh Courant*, December 29th, 1873; *Lancet*, May 30th, 1874.

the Scottish Universities. He was also in this year (1875) made Dean of the Medical Faculty. On entering upon the duties of his chair, he gave as his Introductory Lecture "Man in his Anatomical, Physical, and Physiological Aspects," the lecture appearing in due course in the *Lancet*. Since becoming Professor of Medicine and Anatomy he has engaged in practice, chiefly as a consultant. He was the founder, in conjunction with Drs. Archibald, Constable, Mac Donald, Whitelaw, Douglas, Mackay, and Pithie, of the highly popular and prosperous "Fifeshire Medical Association." In 1875, 1876, and 1877 he delivered, in addition to his ordinary University lectures, three special courses of physiological lectures in Dundee, and did much to foster the higher learning in that great and prosperous seat of commerce. To his efforts, and those of his colleagues, the now flourishing University College of Dundee largely owes its origin.

Professor Pettigrew has done good service for St. Andrew's itself. When he joined the famous old Scotch University it was chiefly celebrated as a School of Divinity and Art. Science was in abeyance, and Medicine languished. He may be said to have largely created a taste for the former, and to have rejuvenated the latter. He was mainly instrumental in founding the New Science Degree at St. Andrew's, and by his efforts, in a principal measure, the University has acquired, under the "Medical Acts Amendment Bill," recently published (1886), a permanent seat in the General Council of Medical Education and Registration of the United Kingdom, and is now on a par in this respect with all the other British Universities. St. Andrew's has long enjoyed the privilege of granting medical degrees. Not only does it give the M.B., C.M., and M.D. degrees to young men who have studied there, and who have had two years' university residence, out of the four years' study required by the curriculum, but it also gives, after due examination, ten M.D. degrees annually to ten registered medical practitioners over the age of forty, thus encouraging practitioners to obtain a university connection. The number of medical chairs at St. Andrew's requires augmentation, and Professor Pettigrew is at present engaged in devising means for increasing the number of the medical professors.

In 1877 Professor Pettigrew was elected by the Universities of Glasgow and St. Andrew's as their representative on the General Medical Council, and this appointment he held for nine years. In 1883 he was selected as Examiner in Anatomy to the University of Glasgow, by the University Court, and in 1886 he had the honorary degree of Doctor of Laws of that university conferred upon him. He has just (1888) been elected President of the old Harveian Society of Edinburgh, now in its one hundred and sixth session. His strong points, as already indicated, are his activity, originality, and remarkable power of generalization. He is a bold, independent, and advanced thinker, and takes a lively and intelligent interest

in university extension and reform. He is especially anxious to see science and modern languages more fully represented in university education. In addition to the works already referred to, Professor Pettigrew is the author of the article "Flight and Flying Machines," in the new or ninth edition of the "Encyclopædia Britannica" (1879); and of a paper on a similar subject in *Fraser's Magazine* for February, 1881. His latest papers are the "Phonograph, or Speech Recorder, in its relation to the Human Voice and Ear" (*Modern Thought* for February, 1882); "Creation—Man's Place in Creation—His Development and Education from a Science Point of View" (*British Medical Journal* for November, 1882); "The Brain as the Organ or Instrument of the Mind;" "Civilization a result of Intellectual Progress," etc., etc.

Professor Pettigrew's writings have met with an unusually favourable reception on the part of the press and the public, and have been translated into many languages. They are deserving of great praise, from the fact that they are one and all the result of much diligent observation and research, experimental or other. They are, further, characterized by an originality and freshness which make them at once interesting and instructive. It is not too much to say that they are as well known on the continent, and in America and the colonies, as at home, and they are standard and classical, as far as works on Anatomy, Physiology, and Physics can be.

BIBLIOGRAPHY.

"On the Relation of Plants and Animals to Inorganic Matter, and on the Interaction of the Vital and Physical Forces." Edinburgh, 1873 (Reprinted from the *Lancet*).

"Animal Locomotion; or Walking, Swimming, and Flying, with a Dissertation on Aëronautics." London, 1873 (International Scientific Series).

"On the Physiology of the Circulation in Plants, in the Lower Animals, and in Man." London, 1874 (Reprinted from the *Edinburgh Medical Journal* and the *Lancet*).

Selected Contributions.

Proceedings of the Royal Society: "Croonian Lecture on the Arrangement of the Muscular Fibres of the Ventricular Portion of the Heart of the Mammal," April 19th, 1860.

Philosophical Transactions: "On the Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart, with Physiological Remarks," part iii., 1864; "On the Muscular Arrangements of the Bladder and Prostate, and the Manner in which the Ureters and Urethra are Closed," part i., 1867 (also *Proceedings of the Royal Society*).

Proceedings of the Royal Society of Edinburgh: "On the Ganglia and Nerves of the Heart, and their Connection with the Cerebro-spinal and Sympathetic Systems in Mammalia," 1865.

Transactions of the Royal Society of Edinburgh: "On the Relations, Structure, and Function of the Valves of the Vascular System in Vertebrata," xxiii., part iii., 1864; "On the Physiology of Wings: being an Analysis of the Movements by which Flight is Produced in the Insect, Bat, and Bird," xxvi., 1871 (also *Proceedings of the Royal Society of Edinburgh*).

Transactions of the Linnean Society: "On the Mechanical Appliances by which Flight is Attained in the Animal Kingdom," xxvi., 1868.

Proceedings of the Royal Institution of Great Britain: "On the Various Modes of Flight in relation to Aëronautics," March 22nd, 1867.

British and Foreign Medico-Chirurgical Review: "On the Presumption of Survivorship," January, 1865.

Lancet: "Man in his Anatomical, Physical, and Physiological Aspects," 1867.

Encyclopædia Britannica (Ninth edition, 1879): "Flight and Flying Machines," ix.

Fraser's Magazine: "Flight, Natural and Artificial," February, 1881.

Modern Thought: "The Phonograph or Speech-recorder in its Relation to the Human Voice and Ear," February, 1882.

British Medical Journal: "Creation; Man's Place in Creation; his Development and Education from a Science Point of View," November, 1882.

ALEXANDER RUSSELL SIMPSON,

M.D., F.R.C.P., F.F.P.S.

THE biography of Alexander Russell Simpson, Professor of Midwifery in the University of Edinburgh, is full of interest, not only on account of his individual discoveries in Obstetrics and Gynæcology, but from his unique position between the men of the present and the remarkable originators of the past generation, connected with the great Northern School. He has had a large share in the steady development of the views and methods of the preceding teachers, and in the evolution of a trained body of skilled investigators and expounders in whose hands future progress is assured. He was born in 1835 at Bathgate, on the old coach-road, midway between Edinburgh and Glasgow. This town was also the birthplace of John Reid, Professor of Physiology in St. Andrew's; of John Fleming, Professor of Natural Sciences in New College, Edinburgh; and of the illustrious Sir James Simpson. Professor Simpson is, in fact, the son of that elder brother of Sir James who is spoken of in the biography of the latter as having supported him in his early struggles, and attended him on his death-bed. Educated at Bathgate Academy, young Simpson afterwards continued his classical education at the University of Edinburgh, passed through the medical curriculum at the same University, and attained the degree of M.D. at the age of twenty-one, as one of the most distinguished students of his year. While still an undergraduate, his fellow-students showed their appreciation of his powers by making him a President of the Royal Medical Society of Edinburgh.

Of all the influences brought to bear upon him during these years of student life, the most important was undoubtedly his constant intercourse with his famous uncle, Sir James Simpson, who was the greatest living exponent of obstetrics and gynæcology. Young Simpson stayed with Sir James during his undergraduate course, and became thoroughly familiar with his ideas and methods of practice. Another inspiring influence was that of Professor Syme, under whom he was working as a favourite "dresser" in the Infirmary, when Lister became Syme's resident Surgeon there. Further, he was in the old-fashioned way "apprenticed" to Professor Goodsir, for whom he acted as a "prosector," and under whom he received a special training in anatomy.

After graduation, he studied for two years in France and Germany, acquiring facility in the languages of both countries, and commencing that thorough acquaintance

Yours very faithfully
A. R. Simpson.

with their medical literatures which is characteristic of all his writings. The first continental school he visited was that of Montpelier, where he worked under Dumas, Alquié, and Courty. While there, he contributed a paper "On the Induction of Premature Labour" to the Medical Society of Emulation, of which he was made a Corresponding Fellow. From Montpelier he went on to Berlin, where he spent two sessions. There he studied Midwifery under Busch and his assistants, Hecker and Schultze, and Pathology (which was then practically untaught in Edinburgh) under Virchow. This last was the most valuable part of his continental study, for Virchow has been finely called the "Genius of Pathology." With him, under Virchow, worked at the time the late Wilson Fox, Professor of Clinical Medicine at University College, London, Alexander Dickson, now Professor of Botany in the University of Edinburgh, and others. They together started a British Pathological Society in Berlin, to which Virchow sometimes came, and to which, on one occasion, he contributed a paper "On the Pathology of Miner's Lung." This paper Simpson afterwards translated and published in the *Edinburgh Monthly Journal of Medical Science.*

Going on to Vienna, he next devoted a month to exploring the pathological protocols of Rokitansky, in search of materials for a comparison between Surgical and Puerperal Fever, the identity of which his uncle had already taught. In that city he also made the acquaintance of Carl Braun, to whom he showed the Edinburgh Midwifery Forceps, with the result that they have since become the favourite instrument in that great *clinique.* He also saw obstetric work with Hohl at Halle, Credé at Leipzig, and Scanzoni at Würzburg; and paid brief visits to other schools.

Before leaving this portion of our sketch, we may refer, as an instance of the impression made by the young Scotch student on his continental teachers, to the testimony of Virchow himself and of Von Tröltsch, Professor of Otology in the University of Würtzburg. The former said that he reckoned Simpson among the ablest workers under him in the Pathological Institution, and the latter, that they had already settled it among themselves that he was destined to occupy a prominent position amongst the Physicians and Obstetricians of Great Britain.

Returning to Scotland, he became assistant to Sir James Simpson in 1858, acting as tutor in the Midwifery class in the University, and taking the Professor's place in the Lecture room, when he himself was absent from illness or other cause, as well as assisting him in his Infirmary and private practice. These duties he discharged for seven years, years of rich practical experience under the first gynæcologist of the time, which, added to his former close intercourse, completed an unequalled training in the department of Medical Science he had given himself to. These years were years of great literary and professional activity. The fact speaks volumes for the knowledge,

strength of character, and teaching power of the young doctor, that he was able year after year to hold a difficult position in which he was daily compared with his uncle, Sir James, and that he could, at almost a moment's notice, take his place with honour before so merciless an audience as a large class of medical students. Further, medical journals of the day contain a number of essays and communications by him of great importance and promise. Many of these were contributed to the Edinburgh Obstetrical Society, of which he became secretary in 1858. The society was, at that time, in a languid condition, and in fact had ceased to publish any *Transactions;* and it was largely the energy of the new secretary which roused it into that life and vigour which have since distinguished it.

During these same years, at the suggestion of Sir Spencer Wells, who was then editor of the *Medical Times and Gazette*, he took, for that journal, notes of Sir James Simpson's lectures, the proofs being corrected by Sir James himself. Years afterwards these were collected by Dr. A. R. Simpson into a volume of "Clinical Lectures on the Diseases of Women"

In 1858 Dr. Simpson introduced the cephalotribe into British practice by persuading Sir James to make use of it. He had been greatly impressed with its almost universal employment in the various continental schools; and, having got one from Scanzoni, he brought it home to his uncle, who at once recognized that the new form was free from some of the drawbacks of the cephalotribes he had previously seen. In 1864 Sir James exhibited a cephalotribe of his own, smaller in bulk and more easily managed than Scanzoni's; and the Simpson instrument, either in its original form, or as modified by Kidd of Dublin, and by Braxton Hicks of London, has come into more and more general use among British practitioners.

In 1865, after these seven years of incessant work, Dr. Simpson went to Glasgow, undertaking an extensive practice in that city, and continuing to devote his special attention to the obstetric and gynæcological departments of medicine. It is interesting to note that upon his departure from Edinburgh a letter was addressed to him by the great body of his fellow-practitioners in that city, bearing witness to the high character of his contributions to the Medical Societies, to the good work he had done during his seven years' stay in Edinburgh, and to his great and valuable experience. The five following years (1865-1870) were occupied in busy practice, but he found leisure to contribute occasional papers to the Medico-Chirurgical Society of Glasgow on subjects in midwifery and gynæcology. In 1868, upon the death of Professor Pagan, he unsuccessfully contested the chair of Midwifery in the University of Glasgow; but two years afterwards he succeeded his uncle, Sir James Simpson, as Professor of Midwifery in the University of Edinburgh. His work as a professor, during the last sixteen years, has been marked by continuous progress, the number of students

attracted by his lectures has steadily increased, and the actual teaching has greatly developed in his hands. Starting amidst the powerful rivalry of such teachers as Dr. Matthews Duncan, Dr. Keiller, and others, he at first had a comparatively small class of seventy students; but this number has increased year by year, until, in 1885, it reached two hundred and eighty, and the average for the last four years has been over two hundred and fifty. Part of this increase is no doubt due to the growth of the Edinburgh Medical School; but, over and above that cause, nothing but brilliant and resolute professional work could have multiplied the numbers of a class fourfold in the space of sixteen years.

Perhaps the most valuable feature of these long years of assiduous labour, however, has been the steady development of the teaching arrangements in connection with Professor Simpson's chair. When he came to it, there was merely the bare hour's lecture five days a week during the Winter Session, supplemented by a tutorial meeting on the Saturdays. The first advance made by him was the institution of a regular system of tutorial instruction, partly in laboratory and class-room, and partly in infirmary. This has, of course, been of immense benefit to the students; but it has had the further result of developing the teaching and investigating powers of those who have conducted these tutorial classes—men of such remarkable talents and promise as Drs. Halliday Croom, Berry Hart, and Freeland Barbour. Professor Simpson has also instituted a Summer Class of Operative Midwifery and Gynæcology, which is voluntary, and meant for such students as wish to acquire special familiarity with the methods and appliances employed in obstetrical and gynæcological operations. Still further to complete the teaching of the chair, he has taken a share in the work of the University Class of Clinical Medicine, so as to give the students in the Infirmary the advantage of instruction in gynæcology. It is noteworthy that the visitor sent by the General Medical Council to report on the Edinburgh system of instruction and examination mentioned this as a special honour to the Edinburgh University School, that it had made the teaching and examination of diseases of women an integral part of the department of Clinical Medicine in the Royal Infirmary, so that graduates do not leave the Edinburgh School without having been actually taught and examined in this subject.

Many of the most interesting of Professor Simpson's papers have been collected and published in the volume entitled "Contributions to Obstetrics and Gynæcology." In addition to the good effect of these and other papers, he has in many ways improved obstetrical and gynæcological practice. Perhaps the most valuable service of this kind he has rendered to medical art, and that with which his name will always be associated, is the introduction into British midwifery of axis-traction forceps. He early saw the significance of the principle brought forward by Tarnier of Paris, gave

to it the designation of Axis-traction, and became its resolute advocate, so that its importance is now generally recognized, as is shown by the endless varieties of axis-traction forceps which are now being brought forward. By his skilful and handy application of the principle to the Edinburgh forceps, he has made that instrument perfect. Wherever the Edinburgh forceps have been adopted (and they are now in general use, not only in this country, but to a considerable extent in America, Italy, and Germany), their supersession, by Professor A. R. Simpson's modification of the instrument is probably only a question of time. Professor Simpson has also devised an instrument for breaking up the base of the skull, and thus making the delivery of the head in contracted pelvis an easier process than when only the vertex has been perforated. The Basilyst (or Basilyst-Tractor, as the complete instrument, with a blade for traction, like the female one of a cranioclast, is called) has not yet been used widely enough to justify the expression of an opinion as to its ultimate position in practice.

With regard to his operative work, it should be observed that Professor Simpson was the first in Britain to make use of Porro's operation, and also that he was the first to employ Battey's operation of oöphorectomy in Scotland, in 1878. He has been twice President of the Obstetrical Society of Edinburgh, and, by his readiness to investigate and introduce new methods of procedure, has stimulated the younger men to eager and onward work. The Chair of Midwifery which Professor Simpson fills is the oldest for that subject in the world, and it is more than interesting to find its life fresh and vigorous, so that the Edinburgh Medical School has never shown more ability in the branch of obstetrics and gynæcology than it does at present.

BIBLIOGRAPHY.

"Contributions to Obstetrics and Gynæcology." Edinburgh, 8vo, 1880.

"Relations of the Abdominal and Pelvic Organs in the Female." With Dr. D. Berry Hart. Edinburgh, 8vo, 1882. (Including an Atlas with a Lithograph Section of a Female Cadaver, Frozen in the Genu-pectoral position).

Selected Contributions.

Edinburgh Medical Journal: "Inaugural Address on the Advances in Midwifery during Thirty Years," December, 1870; "Address to Medical Graduates in the University of Edinburgh, 1st August, 1878," September, 1878; "Gleanings from a Continental Holiday," January, 1879; "Method of Case-taking in Gynæcology," February, 1880; "Basilysis," April, 1880; "On Axis-traction Forceps," September and October, 1880; "Method of Case taking in Midwifery," February, 1881; "Battey's Operation," April, 1881; "Case of Basilysis," March, 1882; "Dystocia from Exomphalos," April, 1882; "Maternity Report," May and September, 1882; "Hydramnios and the Source of the Liquor Amnii," July, 1882; "On the Uterine Sound," August, 1882; "Case of Extirpation of the Uterus through the Vagina for Carcinoma," November, 1882; "History of the Chair of Midwifery in the University of Edinburgh," December, 1882; "Opening Address to the Edinburgh Obstetrical Society," January, 1883; "Basilysis for Dystocia from Hypertrophic Elongation of the Cervix Uteri," March, 1883; "The Prophylaxis of Ophthalmia Neonatorum," April, 1883; "Maternity Hospital Report," June, 1883; "Axis-traction Forceps," October, 1883; "Valedictory Address to the Edinburgh Obstetrical Society," January, 1884; "Uniformity in Obstetrical Nomenclature," 1886.

Transactions of the Edinburgh Obstetrical Society: "Method of Case-taking in Gynæcology," v.; "Method of Case-taking in Midwifery," vi., p. 18; "Axis-traction Forceps,"; "Case of Basilysis," vii., p. 44; "Dystocia from Exomphalos," vii., p. 80; "Maternity Report," vii., p. 99; "Hydramnios and the Source of the Liquor Amnii," vii., p. 118; "On the Uterine Sound," vii., p. 9; "Case of Extirpation of the Uterus through the Vagina for Carcinoma," vii.; "Basilysis for Dystocia from Hypertrophic Elongation of the Cervix Uteri," viii., p. 32; "The Prophylaxis of Ophthalmia Neonatorum," viii., p. 72; "Superinvolution of the Uterus," viii., p. 88; "Maternity Hospital Report," viii., p. 77; "Axis-traction Forceps," viii., p. 143; "Valedictory Address to the Edinburgh Obstetrical Society," ix., p. 1; "Maternity Hospital Report," ix., p. 203; "Maternity Report," x., p. 174.

Edinburgh Clinical and Pathological Journal: "Dr. Marion Sims," 1883; "Clinical Lectures on Pelvic Presentations," June and July, 1884.

Obstetrical Journal: "Obstetrics and Gynæcology One Hundred Years Ago," December, 1876.

British Medical Journal: "Case of Cæsarean Hystero-Oöphorectomy, or Porro's Operation," June 11th and 18th, 1881; "Lecture on the History of Embryulcia," December 13th, 1884.

Transactions of the International Medical Congress, 1881: "Uniformity in Obstetrical Nomenclature," iv.

THOMAS GRAINGER STEWART,

M.D., F.R.C.P., F.R.S.E.

PROFESSOR GRAINGER STEWART is the son of a successful business-man of Edinburgh, and was born in that city on September 23rd, 1837. He was educated at the Edinburgh High School, and proceeded thence to the University, where he had a distinguished career, being elected, in the fourth year of his study there, one of the Presidents of the Royal Medical Society. With the exception of an elder brother, who devoted himself specially to the subject of lunacy, and died at an early age while Superintendent of the Newcastle Asylum, he was the first member of his family to enter the medical profession. After graduating as a Doctor of Medicine at Edinburgh in 1858, he went abroad in the autumn of that year, in order to attend special *cliniques* on the Continent. His first place of residence was Berlin, where he followed closely all the pathological courses under Professor Virchow, and the clinical instruction of Schönlein, Traube, and Joseph Meyer, and, at the same time, took advantage of the general opportunities which the German capital afforded for culture in art and general literature. At the end of the winter session, he passed on to Prague, whose hospital he attended for six months, and then proceeded to Vienna, where he had the great advantage of intimate acquaintance with Rokitansky, the veteran pathologist, and followed the instruction of Oppolzer, Skoda, Hebra, and Siegmund.

On his return to Edinburgh, Dr. Stewart obtained the appointment of Resident Physician to the University Wards of the Royal Infirmary. This appointment he retained for a year under Professors Bennett and Laycock. While resident in the Infirmary, he conducted observations as to the differential diagnosis of the various forms of Bright's disease, and soon afterwards made a communication on the subject to the Medico-Chirurgical Society of Edinburgh. This paper was well received, being quoted, for example, in Dr. Aitken's "Practice of Physic," in reference to the diagnostic features of waxy kidney; and in many quarters it attracted considerable attention. Several other contributions on Bright's disease were made by Dr. Stewart about this time. In 1860 he commenced practice in Edinburgh, and in the following year became a Fellow of the Royal College of Physicians. At this period he worked hard in his practice among the poor in the Dispensary, as well as in one of the districts in St. Cuthbert's parish. In St. Cuthbert's Poorhouse he made numerous *post-mortem*

examinations, and prepared himself for lecturing in the extra-mural School. He delivered but one summer course of lectures on Materia Medica and Dietetics, being appointed, in the autumn of 1862, Pathologist to the Infirmary and Lecturer upon General Pathology at Surgeons' Hall.

These appointments he held for seven years, and among his students were such men as Dr. Caton, of Liverpool, Dr. Lauder Brunton, and Dr. Ferrier. A year or two after his appointment as Pathologist, he was entrusted by the managers of the Infirmary with the charge of a ward, in which, with a small group of students, he had the opportunity of pursuing his clinical studies. During these years he wrote a number of papers upon the kidney, upon dilatation of the bronchi, acute atrophy of the liver, and other subjects; and, in 1869, he published the first edition of his book upon "Bright's Diseases of the Kidney," which has since gone through two editions in England, and two in America. The views embodied there have been largely accepted upon the continent as well as in England.

Some of these early communications embodied many important facts, and included reports of several remarkable cases. Thus in 1863 Dr. Stewart contributed to the *Edinburgh Medical Journal* the description of a case of dilatation of the lacteals. Another scarcely less remarkable case, published in the *British and Foreign Medico-Chirurgical Review*, was of syphilitic affection of the liver, which took the form of waxy or amyloid degeneration. Dr. Stewart was anxious to direct attention to the subject, because from the rarity of such lesions he might have had to wait long ere another instance was brought to his notice. As a matter of fact he subsequently examined the specimens of syphilitic affection, and waxy degeneration of the liver, in the Pathological museums of Berlin and Prague, but found none exactly corresponding to the case in his own experience. Another rare case, one of acute yellow atrophy of the liver, was published, in the *Edinburgh Medical Journal*, because it seemed fitted to throw light upon the disputed question of the nature of the affection of which it was an example. Dr. Stewart leant to the view that acute yellow atrophy was due to a blood disease, and that the destruction of the hepatic cells (the result of exudation), as well as the hæmorrhages which are often associated with it, depended upon the marked weakening of the heart's action, and the rapid increase of the peripheric metamorphosis of matter. About the same time he showed that changes of this kind in the liver were also found in the kidneys, and in one case the kidneys were primarily affected.

During these years Dr. Stewart cultivated family practice as a physician, following in this respect the example of many of the most distinguished physicians in Edinburgh. In the year 1869 the chair of General Pathology in the University becoming vacant, he offered himself as a candidate, but lost the appointment, Dr.

Sanders being elected by a majority of one. This gentleman was Lecturer on Physiology at Surgeons' Hall, and a highly esteemed clinical teacher in the wards of the Royal Infirmary. Finding the avenue of promotion closed in this direction, Dr. Stewart resigned his pathological appointments, which he had held for seven years, and was made Junior Ordinary Physician to the Infirmary. For four years after receiving this appointment he devoted himself to clinical observation and teaching, and his wards soon became much frequented by the students. In his fifth Winter Session he undertook a course of lectures on the Practice of Physic, and his first course was attended by upwards of sixty students. Two years later his class had risen to nearly one hundred, and then, on the death of Dr. Warburton Begbie, he was advised by his medical friends to relinquish family practice, and devote himself exclusively to consultation work.

In the autumn of 1876, on the death of Professor Laycock, he was appointed to the chair of the Practice of Physic, a chair made famous by Whytt. Cullen, the Gregorys, and Alison. In this professorship his duties are to lecture on five days a week, during the Winter Session, on Systematic Medicine, and to conduct a *clinique* in the Royal Infirmary. In both of these departments he has very large classes. Since his appointment to the chair, Professor Stewart, though not taking an active part in the work of the Senatus Academicus, has taken an active share in separating mental diseases from the course of Medicine, and in transferring it to a new department, as well as in developing the clinical teaching, and in affiliating to the University Clinical Lectureships upon the Diseases of Children and upon Fever, though in the last particular he has not yet been entirely successful.

Professor Grainger Stewart is a rarely-gifted clinical teacher, combining at once lucidity with depth. His tall figure and commanding presence, taken along with his ready gift of speech, and occasional flashes of humour, combine to give his lectures a peculiar attractiveness and charm. His success in this branch of work, as well as in general professional life, is mainly attributable, perhaps, to the power which he possesses in an eminent degree of acquiring and retaining, and, in particular, of imparting knowledge. He can, with the greatest rapidity, take the meaning and substance out of an article or book; and, reading German as easily as English, he has ready access to the best scientific work of our time. His memory also is particularly retentive, and he is thus enabled to store up a vast amount of information, which his power of lucid description and of vigorous statement makes at once available to his students. Indeed one who knows his teaching well says that in these respects he can only be compared to Professor Hughes Bennett himself. As an observer, too, he is extraordinarily acute, combining rapidity with accuracy. His love of work and natural energy of character have sustained his diligence from his student days until now, and change of work is his mental relaxation.

Professor Stewart's Systematic Classes are exceedingly large, and the students who crowd his wards testify to his professional success. As a teacher he has further developed the system originally introduced by Hughes Bennett, whereby every student present has his interest constantly kept alive, and is made to take a part in the examination of the cases, and in discussion upon them. His method of case-taking, which marks a great advance on those previously in use, has been largely adopted in Edinburgh and elsewhere.

A year or two later he gave an Introductory Lecture at the Inauguration of the Practice of Physic Department in the new University Buildings, rightly observing that no other University is able to offer so magnificent a home to its Medical Faculty. After taking a brief review of the typical historical stages or phases of the art, he described the type to which modern students should conform themselves. "The physician of our time," he said, "ought to be well versed in the sciences of chemistry and natural philosophy; he should be stored with knowledge of the structure and functions of the organic world. In the course of these studies he should have learned habits of accurate observation, of cautious induction, and of inquiry suggested by rational speculation. He should have mastered human anatomy, and know well the functions of the body; he should know the morbid processes to which it is liable, and the symptoms and signs by which these processes manifest themselves; he should be acquainted with the actions and modes of employing the really important articles of the materia medica; and he should reverently recognize that his work is almost the noblest to which man can apply himself. Our ideal physician is proud of his profession of medicine, modest as to what the art has yet attained to, still more modest as to his own acquirements. He sets himself to study patiently and thoroughly the cases entrusted to him, and, after due consideration, and on what seems to him good grounds, to use all the means in his power for the advantage of the patient. He is thus not a routine practitioner; he wishes, as all should, to advance his profession as well as to advance in it, and therefore he so works and reasons that inevitably, from time to time, he is rewarded by the discovery of new facts; and if he continues to work, he will find that somehow he gets into relationship with all the men of similar aspirations and labours, and can appreciate their new facts with a readiness that were otherwise impossible."

At the meeting of the British Medical Association at Bath, in 1878, Professor Stewart delivered the opening address in the Section of Medicine, wherein he elected to speak of topics with which he was himself specially familiar. Thus he drew attention to the disease known as Glomerulo-Nephritis, to the remarkable lesion of Puerperal Eclampsia, to the true nature of the Cirrhotic Process, and to the stages of transformation in Bright's Disease, throwing valuable light from his own experience and knowledge upon these several subjects.

When the International Medical Congress met in London in 1881, Professor Grainger Stewart made the introductory speech in the discussion "On the Morbid Histology of the Different Forms of Bright's Disease," basing his remarks on the careful study of the renal cases which had come under his observation in the Royal Infirmary of Edinburgh during a period of twenty-two years, and giving the views which such observation and reading together had led him to entertain. Those views will be found lucidly set forth in the *Transactions* of the Congress.*

Upon the death of Sir Robert Christison in 1882, Professor Stewart was appointed Physician-in-Ordinary to Her Majesty the Queen for Scotland. In the same year, under the strain of work, his health broke down in an attack of acute rheumatism, but, after seven months' rest, he recovered without permanent injury.

During the ten years of his incumbency as Professor of the Practice of Physic, he has written many papers, published a number of lectures, and is still actively engaged in clinical observation and research. He was the first in this country to draw attention to the deep reflexes, and, under the title of "Paralysis of the Hands and Feet from Disease of the Nerves," he described very minutely the condition which has now come to be known as Multiple Neuritis.

In 1884 Professor Stewart published a series of Lectures which he had delivered in the University of Edinburgh during the Tercentenary year, being an "Introduction to the Study of the Diseases of the Nervous System." Many of these lectures illustrate clearly, and constitute a commentary upon, the professor's clinical method of examining and describing nervous symptoms, a system which he has for many years employed in the Hospital and Lecture Room ; others treat of the foundation upon which all accurate knowledge of nervous diseases must be built ; while the last two bring out important points bearing upon the pathology of the nervous system, and some general considerations as to treatment. Professor Stewart has also issued the first of a series of Clinical Lectures upon important symptoms. These lectures were on "Giddiness," and have been largely quoted on the continent, and have been translated into Russian.

As a trusted Consultant Pysician, with a large practice, Dr. Stewart holds a foremost place in Scotland, and throughout Scotland and the North of England his opinion is much in demand. His large experience in pathology and medicine, his kindly manner and quickness of perception, are sufficient to account for this success. It should be mentioned, in conclusion, that Professor Stewart has strong religious convictions, and is an active supporter of evangelistic work in the University and the community generally.

* Vol. i., p. 391.

BIBLIOGRAPHY.

"On the Position and Prospects of Therapeutics." Edinburgh, 12mo, 1862.

"A Practical Treatise on Bright's Diseases of the Kidney." Edinburgh, 8vo, 1869, 1871, etc.

"Note of a New Form of Pseudo-Paraplegia." Edinburgh, 8vo (8 pp.), 1875.

"Address delivered at the Opening of the Section of Medicine at the Annual Meeting of the British Medical Association in Bath, August, 1878, etc., etc.," 8vo, 1878.

"An Introduction to the Study of the Diseases of the Nervous System." Edinburgh, 8vo, 1884.

"Clinical Lectures on Important Symptoms." Part 1—Giddiness.

SELECTED CONTRIBUTIONS.

Edinburgh Medical Journal: "The Waxy or Amyloid Form of Bright's Disease," February, 1861, and August, 1864; "On Dilatation of the Lacteals," November, 1863; "Acute Yellow Atrophy of the Liver," October, 1865; "Acute Atrophy of the Kidneys and Liver in a Pregnant Woman," January, 1866; "A Case of Inflammatory Bright's Disease, Fatal in the Third Stage," June, 1871; "Cases of Paraplegia," July, August, and September, 1876; "Address to the Medical Graduates in the University of Edinburgh, 1st August, 1879," September, 1879; "Introductory Address delivered at the Inauguration of the Practice of Physic Department, in the New University Buildings," January, 1882; "A Case of Tapping the Pericardium, etc.," August, 1885.

British and Foreign Medico-Chirurgical Review: "On a Case of Syphilitic Affection of the Liver," October, 1864; "The Morbid Anatomy of Bright's Disease," October, 1865; "Diagnosis of the Forms of Bright's Disease," July, 1866; "On the Complication of the Different Forms of Bright's Disease," January, 1867.

Practitioner: "A Case of Unilateral Catalepsy," August, 1876.

Medical Times and Gazette: "Waxy and Syphilitic Disease of the Liver with Ascites," 1874; "On Abdominal Abscess," 1875.

Transactions of the International Medical Congress, 1881: "The Morbid Histology of the Different Forms of Bright's Disease," i., 391; "What is the Clinical Value of the Examination of the Urine in Bright's Diseases?" ii., 109.

LAWSON TAIT,

F.R.C.S., M.D.

MR. LAWSON TAIT, the distinguished Surgeon, was born in Edinburgh in the year 1845. He is the only surviving son of Archibald Campbell Tait, a Guild Brother of the well-known Heriot's Hospital, into which Lawson Tait was admitted at the age of seven. He had a distinguished career in that School, and, gaining a Scholarship, entered the University of Edinburgh, where he passed through the curriculum of Arts, and afterwards of Medicine. During his medical studies, from 1860 to 1866, he was under the immediate guidance of a young operating surgeon of great promise, the late Alexander M'Kenzie Edwards, the favourite pupil of Sir William Fergusson, and he was also closely associated with Sir James Young Simpson, to whose line of practice he has since exclusively devoted himself. Mr. Tait took the licence of the Royal College of Surgeons of Edinburgh in 1866, of which, in 1870, he was made a Fellow, *honoris causâ*. In the latter year also he became a Member of the English College, and a year later took its Fellowship by examination.

Mr. Tait originally intended to remain in practice in Edinburgh, but, owing to the death of his master, this intention was abandoned, and, after a brief sojourn at Wakefield, as house-surgeon to the Hospital there, he selected Birmingham as a suitable field for the special work to which he had devoted himself. He settled at Birmingham in September, 1870, taking up his professional quarters in the house of Dr. Bell Fletcher. Shortly after going to his new home he connected himself with a movement to establish a special Hospital for the Diseases of Women, in Birmingham, to which, along with Dr. Savage, he was soon appointed Surgeon, and with this institution he has been prominently associated ever since. Mr. Tait had not long been in Birmingham before he made the acquaintance of Mr. George Dawson, at that time editor of the *Birmingham Morning News*, the staff of which journal he joined, and from this connection he derived considerable advantage during his early professional struggles. He was appointed Lecturer on Physiology and General Biology at the Midland Institute, in 1871, an office which he held until 1879, when his increasing professional engagements compelled him to resign it. In 1871, also, Mr. Tait married Sibyl Anne, daughter of Mr. William Stewart, solicitor, of Wakefield.

Yours very truly

Lawson Tait

It is abundantly true, as Mr. Tait said in his address given before the Birmingham Medical Society on his "Series of One Thousand Cases of Abdominal Section," that "every one of these operations was either originated in that town, or was reared from its state of struggling infancy into full adolescent life within its fostering boundaries," and that "abdominal surgery has grown and advanced, not in London, but in the large provincial towns of Great Britain." It is equally true that to Dr. Charles Clay, of Manchester, whose biography appears earlier in this volume, to Dr. Keith, of Edinburgh, to Mr. Lawson Tait himself, and to some others, these advances are largely due, and there is no doubt of the remarkable progress achieved by the "Birmingham School." Of Sir Spencer Wells's successful labours in abdominal surgery, an account will be found in the first volume of this work.

"Not the most inveterate opponent of Mr. Lawson Tait on special points," as the *Medical Press and Circular* remarked, "would for a moment dream of depreciating the magnificent results of his professional labours, or for a moment presume to question his absolute claim to the gratitude of mankind through the unquestionable success of his life's work. Not a little of the usefulness of this lies in the lessons that may be gathered from the history of the experiences through which the Birmingham operator has advanced to his present exalted position among professors of abdominal surgery; and the most prominent lesson of all is one on which he himself lays stress, that, viz., of the importance of experience on the part of the operator."

The first abdominal section performed by Mr. Tait was in the year 1867, and the first important contribution which he made on the subject was his essay on "Diseases of the Ovaries," which gained for him the Hastings Gold Medal at the meeting of the British Medical Association, in London, in 1873. The presentation was made by Sir William Fergusson, who said that he had "to congratulate Mr. Tait upon obtaining the distinction, and this honour was the greater inasmuch as the award was not made as a matter of course; for, though, in some years, there had been competing essays of singular merit sent in, the medal had not always been given, while this year it had been awarded with every imaginable approbation, and that circumstance showed the winning essay very much redounded to the credit of the writer. The question proposed was of modern date, and one on which some of the best writers of the day had been engaged. The subject was one of the most original surgical subjects of the century, for it was one which had been developed in modern surgery. It was something for Mr. Tait to have earned distinction in this way, and all present would feel themselves honoured in having the opportunity of congratulating Mr. Tait. It was his duty to congratulate Mr. Tait in the name of the Association, and he performed his task with the greatest pleasure." Sir William concluded by wishing him prosperity in a career which he had so admirably begun.

It will be impossible, in the short space at our disposal, to give a very precise account of Mr. Tait's methods in his work, and his writings, of which a list will be found below, must be referred to. His long experience and extensive practice have given him an exquisitely fine skill in diagnosis, and he is enabled to proceed to operation with the utmost confidence, and by long practice has obtained a facility for treating whatever may turn up. "It is perfectly impossible for me," he says, "to convey by any kind of description how I can tell, by the touch, an inflamed vaginal mucous surface from one that is healthy; neither can I describe the feeling that the everted surface of the cervix gives to me, which declares the condition of chronic endometritis. But I know that my educated finger-tips can make this distinction. If, on the other hand, I discover a pelvic tumour, long practice enables me to tell with almost perfect certainty, and without the use of the sound, that it is a retroverted fundus, or adherent tube or ovary, or, by its fading away toward the broad ligament, on one aspect of the uterus or another, that it is an intraperitoneal hæmatocele; while the peculiar resistance of a myoma conveys to my mind an accurate impression which needs no probing of the uterus to substantiate. So a cyst reveals itself in a way I cannot communicate. As a result of all this I very rarely use the sound."* As a matter of fact Mr. Tait has found the speculum and the sound, as methods of diagnosis, productive of more harm than good. He holds, notwithstanding his skill, that "a complete and satisfactory diagnosis can never be made, save in the simplest condition of disease of the abdomen, without an exploratory incision. . . . I have said over and over again that the abdomen is a region of darkness."

The following extract from an account given by Dr. Meinert, of Dresden, of a visit which he paid to Mr. Tait will be of interest, and will illustrate, in some degree, Mr. Tait's methods† :—"Mr. Lawson Tait, a short, stout man of about forty years, with a strikingly large head, and eyes as intelligent as sympathetic, received me with few words, but in a very friendly manner. He consented to my wish to be allowed to be present, not only at the operation upon my own patient, but also at as many as possible of his other operations, and added the invitation to be present at all which were of interest to me. He gave directions that none of his patients should remain unknown to me, and that every desired information should be placed at my disposal. This was done either by him, by his assistant, or by access to his records of the cases. He listened to my description of the case which I brought to him, and communicated by means of a speaking-tube the points which seemed to him important, to his secretary, a nice young lady, to whom I was presented later on, and to whom I was grateful for many extracts out of the material of her chief. She took

* "Methods of Diagnosis," *Provincial Medical Journal*, June, 1886.

† *Berliner Wochenschrift*, April, 1886; translated in the *Provincial Medical Jorunal*, September, 1886.

down my narration in shorthand in a distant room. . . . . Before I report upon the operations witnessed, more especially by myself, I will make a few general remarks upon Mr. Tait's mode of procedure in performing laparotomies. His antisepsis is limited, as is well known, in its entirety, to cleanliness, and his antiseptic fluid is aqua fontana. Of antiseptics, in the narrower sense of the word, I found only the iodoform for dressing over the sloughing stumps of his hysterectomies, and a solution of carbol, of the strength of one per cent., for the cleaning of used sponges. These are kept dry in cotton bags after the finishing of a pretty minute process, and are only moistened immediately before the operation. The treatment of the instruments and materials to be used in the operation rests with one confidential hand. The silk is boiled immediately before in water; the use of gut I never witnessed. The dressing consists of a piece of hydrophyle wool fixed with adhesive plaster upon the abdominal wound and enveloped in gauze; no wrappings of the abdomen; change of bandage once daily—in the case of abdominal wounds which require draining, more often. The draining of the abdominal cavity (always by means of the incision in the linea alba) takes place remarkably often, and indeed always if either the hæmorrhage has been considerable, or when any serous fluid has flowed into the abdominal cavity, or when a scrupulous toilette of the peritoneum has not been practicable. The material of the drains is glass, and the apertures sufficiently fine to prevent a lodgment of particles of tissue. By means of a special small sucking apparatus the drain is often emptied by a nurse, in the first stage, commonly every three hours, a thing which always necessitates a change of bandage. The instruments are cleaned with water and polishing powder, and arranged before the operation in small vulcanized india-rubber basins filled with water. The needles, provided with silk, are also, three or four together, wrapped in pieces of linen, in which they are handed to the operating surgeon. Slightly bent needles provided with handles are used in preference, particularly for perforations of the pedicles to be cared for, and for perineoraphies. The site of the operation and the hands of the operator are cleaned with soap and water. A special operating room is not used, but every operation takes place in the room of the patient. Never more than one assistant is required, and even this one has, as a rule, very little to do. I never witnessed an instance when his task exceeded the holding of a forceps for arteries, or the assisting in drawing a ligature of silk. The medical men assisting the operation as spectators must remain in their places, which they are not permitted to leave until the person operated upon has been put to bed. Mr. Tait insists strictly that no one shall speak during the operation. He limits himself to the most necessary instructions. Clover's apparatus, provided with one part of chloroform and two parts of ether, is used for the purposes of narcosis. A lengthened preparatory dietetic treatment does

not take place. Patients receive nothing solid twenty-four hours before and forty-eight hours after the operation. An enema suffices for the preparatory evacuation of the intestines, and the first evacuation after the operation is effected on the third or fourth day, generally by means of ol. Ricini. Mr. Tait likes to take a number of operative cases together, and it often happens that he executes four or five laparotomies during a few morning hours. He operates quickly, cleanly, and unhesitatingly. I do not remember a single manipulation amongst the twelve operations which I witnessed which afterwards might have been considered as faulty, or even superfluous. The abdominal incision is never larger than the object to be extracted necessitates. The liquid contents of any formations which are too large to be drawn through an abdominal incision which permits three fingers to pass are emptied by puncture."

As is hinted above by Dr. Meinert, Mr. Tait scarcely makes use of any antiseptic precautions other than those of perfect cleanliness. "I tried," he says, "the so-called antiseptic system in all its ever-varying details in as complete and unprejudiced a series of experiments as I believe it possible for man to undertake. I finally came to the conclusion that my patients were being poisoned by the use of carbolic acid, thymol, and various other chemical substances, which were being used by others as well as myself for the purpose of destroying the germs which were supposed to do so much harm. I published a series of cases which proved to my mind conclusively that I could do better without Listerism than with it, that in fact the only tendency of this so-called antiseptic system was to mar a success which was speedily increasing, and which arose from a variety of improvements, at the head of which was the discontinuance of the clamp."* This trial, which extended over three years, induced Mr. Tait finally and completely to abandon Listerism, and his published statistics and low mortality may be thought to have justified his action. In relation to the question of anæsthesia, Mr. Lawson Tait's experience is of great value. He rejects ether alone on account of the bronchial irritation it produces, and also because the urinary secretion is completely arrested during its administration, and it is consequently a potential element of danger in all cases where kidney disease may co-exist. The anæsthetic now invariably employed by Mr. Tait is a mixture of ether (two parts) and chloroform (one part), given by means of Clover's apparatus. It acts rapidly, is not unpleasant, and induces a minimum amount of subsequent sickness.

Until 1877 and 1878, however, the "School" of Abdominal Surgery, originated at Birmingham by Mr. Tait, made no very satisfactory progress, but at that time a new departure was made, when his attention was drawn to the remarkable results in Ovariotomy obtained by Keith, chiefly through the revival of the principle of intra-peritoneal treatment of the pedicle as originally devised by Nathan Smith, and

* *Provincial Medical Journal*, September, 1885.

practised by Baker Brown. The brilliant results thereby obtained were so satisfactorily equalled in Mr. Tait's own practice, that he was enabled to reduce his mortality from thirty to three per cent.

As a natural result of his increasing success in the removal of ovarian tumours Mr. Tait soon extended his field of work, and began to deal surgically with a number of abdominal diseases, many of which, up to that time, were either entirely unrecognized or not considered to be within the limits of the art of surgery. He was the first to perform, successfully, in 1879, the operation of Cholecystotomy, orginally devised by Dr. Marion Sims in the previous year—the opening of the gall-bladder for the purpose of removing gall-stones. This operation he has performed many times successfully. The first case was published in detail in the *Transactions of the Royal Medical and Chirurgical Society* for 1880. A large impacted gall-stone was removed from the dilated bile-duct ; and that the organ was fully restored to its function was shown by the regurgitation of the bile from the wound during the whole time occupied by its healing. Mr. Tait also extended this proceeding in the operation of Hepatotomy, actually cutting into the substance of the liver, and removing thence large hydatid tumours, this operation having been completed several times, with a perfect cure of the disease. Again, in cases of cystic abscess of the kidney, he adopted a similar proceeding, save when the tumours were multicystic, and then he broke down the walls between the cysts, and drained them into a common cavity. Mr. Tait has also, on at least three occasions, opened the abdomen for the purpose of removing the spleen, but in none of the three were the conditions such as to warrant him in proceeding with the operation. In addition to these special advances, Mr. Tait also introduced a new method of dealing with that most most untractable disease, pelvic abscess, by the perfectly safe and speedy method of opening the abdomen and draining the abscess from above. Thirty of these operations have been performed without a death, and with complete cure of the disease. The extremely fatal cases of Fallopian pregnancy rupturing in the early months, and causing death by hæmorrhage, have also been cured by him five times out of six, another additional success to these novel and daring proceedings. Again, collections of fluid in the Fallopian tubes have been operated upon many times by Mr. Tait, numbers of his cases having been taken from hospital to hospital, and from surgeon to surgeon, seeking relief in vain. "In all of them I opened the abdomen, and either removed the tubes and ovaries affected, or I drained the tube in the manner described. The tubes were removed in eleven cases (out of twelve), and I had recourse to drainage in one of them. The success of these operations was most satisfactory, for in every one of them recovery was complete."

In 1872, Mr. Tait first suggested, simultaneously with Hegar, and carried into effect with complete success, the removal of the uterine appendages for the treatment

of myoma, but the results of this practice in his early work were such as to deter him from extending it to any very great extent. As soon, however, as the statistics of ovariotomy came to be so low, he at once resumed his extension of abdominal surgery, and engaged in the performance of several new operations, which, as has already been seen, have excited a very great deal of discussion and some adverse criticism. The main point against which opposition was levelled, was the removal of the uterine appendages for chronic inflammatory disease, but demonstration after demonstration, both of operations performed and diseased appendages removed, made it perfectly clear that the proceeding had been entirely misunderstood, and that the charges which had been made of removing normal ovaries could not be in any way sustained, so that now the operation has been completely vindicated, and its practice is being followed in every country in Europe and throughout the American continent. In order to illustrate the caution with which these operations were received in England, it may be mentioned that when Mr. Tait reported his first thirty cases of removal of the appendages for myoma, the paper was not included in the *Transactions of the Royal Medical and Chirurgical Society*, and had to be published in the *American Journal of the Medical Sciences* instead. But of the radical operation of hysterectomy Mr. Tait has a great dread. "Of hysterectomy I may say at once it is an operation which I detest. Its mortality is fearful. Sir Spencer Wells has had over fifty per cent. of deaths, and my own mortality has been 35.7 per cent. Bantock has recently had a run of bad luck, the mortality of other operators is not fully displayed, and Keith alone has had brilliant results. My own heavy bill is chiefly due to deaths from hæmorrhage, which resulted from trying the plans recommended by Spencer Wells with the intra-peritoneal method. All the eight cases in which I tried this plan died, and they all died in the same way, shrinkage of the pedicle, from serous oozing and subsequent hæmorrhage. I tried every device which I could invent, and everything I had seen recommended, to prevent this accident, but in vain. Four deaths occurred in seven cases where I used Wells' clamp; in two cases I used the cautery with one success. In thirty-seven cases where I adopted the extra-peritoneal method with the principle of circular constriction of the pedicle, I have had six deaths, and this is far more satisfactory and promising. There can be no doubt that for uterine tumours the extra-peritoneal method of dealing with the pedicle is the only one admissible."

Another advance of a material kind in abdominal surgery is due to the innovation advocated and introduced by Mr. Tait, of treating cases of obstruction of the bowels by opening the abdomen, and establishing an artificial anus on the first presenting piece of intestine which is distended, instead of as was formerly practised, hunting about for an obstruction which was very rarely found. Eight instances of this

operation resulted in only one death. Similarly he has advocated the practice of opening the abdomen in chronic and acute peritonitis, cleaning the cavity and draining it, and here his new practice has again been followed by the most marvellous success. Mr. Tait's published records teem with cases of successful treatment in tumour of the kidney, spleen, and uterus. He has also advanced wholly new views on the pathology of extra-uterine pregnancy, and other points, which have met with general acceptance. Large numbers of foreign visitors have flocked to Birmingham to see these operations, and have carried away with them specimens of the diseases, which are now exhibited in the chief medical museums of the world.

In an address before the Birmingham Medical Society, Mr. Tait gave the results of a "Series of One Thousand cases of Abdominal Section," made by him up to the end of December, 1883, which, as the *Medical Press and Circular* said, was "a striking and impressive illustration of the unspeakable benefits which may be conferred by even a single operator in diminishing the aggregate amount of human suffering." The average death-rate on the whole series of cases was 9.3 per cent., but the record showed a continuous reduction of this rate, and made plain the large part which Mr. Tait's growing acquaintance with the minutiæ of the operation, and with the slightest indication of disease, had had in his latest successes. "Whether this death-rate is high or low," remarked Mr. Tait, "I cannot say, for no such series has before been published, and, therefore, I cannot discuss it relatively. I think it high, and am perfectly certain that if I live to complete another such series it will have a very much lower mortality; and for two reasons. In the first place, the present series contains my early work, where the want of experience told heavily. The second reason is that important causes of failure have been absolutely removed by the complete discontinuance of the clamp in ovariotomy and of the ligature in hysterectomy, and cases of all kinds are now operated upon at earlier stages of these diseases than they were when I first began my work, all of which points will be discussed in their proper places." Referring to this series, the *Medical Press and Circular* justly remarked: "No one will withhold from Mr. Tait the hearty congratulations to which he is entitled on the publication of his experience of one thousand cases of abdominal section. No one either, we venture to think, will be found to dissent from the opinion that such a record as this publication contains is one of which any surgeon in the world might well be proud."

Again, in September, 1885, Mr. Tait published in the *Provincial Medical Journal* a "Series of One Hundred and Twelve Consecutive Operations for Ovarian and Parovarian Cystoma without a Death," in not one of which, he said, had "carbolic acid, or thymol, or corrosive sublimate, or any of the multifarious germicides, touched any patient either directly or indirectly." This series had never been approached in

its success, and Mr. Tait had steadily reduced his mortality, since he gave up the clamp, from eight per cent. to six, five, and three per cent., till he had, as we might almost say, brought it to a vanishing point. This epoch-making "series" was speedily amplified in a paper read before the Birmingham and Midland Counties Branch of the British Medical Association, wherein Mr. Tait recorded one hundred and thirty-nine consecutive ovariotomies without a death. "Such a series," remarked the *Provincial Medical Journal*, "is unexampled. We need hardly emphasize the importance of this paper, or the influence it must have upon abdominal surgery." The *Medical News* also, speaking of this great success, observed: "Little more than three quarters of a century has elapsed since McDowell, in a small Kentucky village, first performed ovariotomy, and now Lawson Tait, in one of the great cities of England, has brought the operation to a perfection which probably can never be exceeded. It is remarkable that he who began, and he who has obtained the highest success in one of the greatest and most beneficent of operations should belong to the same century and to the same English-speaking race. The glory of this success belongs chiefly to these two men, but the good which results is for all."

These great successes were eagerly watched in the United States, where Mr. Tait has many followers, and extirpation of the ovary is almost of daily occurrence in New York. When he visited that city, in 1884, he operated upon two patients in the amphitheatre of the Bellevue Hospital there, after diagnosing diseased ovaries in each case, and the patients both made good recoveries. The University College of New York, therefore, very appropriately conferred upon Mr. Tait, in March, 1886, the honorary degree of Doctor of Medicine.

Mr. Tait was a member of the British Gynæcological Society when it was founded, in 1884. He was one of its first Vice-Presidents, and its President in 1885, this being probably the first example of a surgeon living entirely in a provincial town being elected president of a metropolitan society. He is also President of the Birmingham Branch of the British Medical Association, and President of the Birmingham Branch of the Medical Defence Union. He was President of the Birmingham Philosophical Society in 1884, and of the Birmingham Natural History Society in 1876. He was appointed Ingleby Lecturer on Diseases of Women at Queen's College, Birmingham, for 1886. He is also at the present time Professor of Anatomy to the Royal Society of Artists, Birmingham, and to the School of Design. He is a prominent member of the Council of the British Association for the Advancement of Science, and a Fellow of a large number of British and foreign scientific societies.

Mr. Tait's fellow-citizens regard him as a richly endowed, if somewhat restless spirit, who, through the occasional aggressiveness and uncompromising manner

which spring from strong conviction, has raised up for himself some enemies. He is, however, generally popular, for he has always taken a lively interest in the public and municipal life of the town—scientific, literary, and political—and his attention has been especially directed to its sanitary condition, and to all subjects connected with the health of the people. In 1866 he was elected to represent the Bordesley Ward in the Town Council, and, two years afterwards, on his election being opposed, he was again returned by a large majority. He is a member of the Health Committee, of which he has been chairman, and of the Asylum Committee, on which his large knowledge and eminent ability have been of the greatest service. Mr. Tait was the founder of the Midland Union of Natural History Societies, and of the *Midland Naturalist*, and the promoter of the Birmingham Provident Dispensaries. He was also largely concerned in the establishment of coffee-houses in Birmingham. At the general election of 1886, he contested the Bordesley Division of Birmingham in support of the Irish policy of Mr. Gladstone, but was defeated by Mr. Jesse Collings, a "Liberal Unionist" candidate, who received the votes of the Conservative party.

BIBLIOGRAPHY.

"The Treatment of Cleft Palate," 1870.

"The Pathology and Treatment of Diseases of the Ovaries" (Hastings Prize Essay, 1873), 1874. Fourth Edition, 1882.

"An Essay on Hospital Mortality, based upon the Statistics of the Hospitals of Great Britain for Fifteen Years," 1877.

"Diseases of Women; a Text-book for Students and Practitioners," 1877, etc.

"Diagnosis and Treatment of Extra-uterine Gestation."

"Four Hundred Cases of Ovariotomy," 1882.

"A Thousand Cases of Abdominal Section," 1884.

"One Hundred and Thirty-nine consecutive Cases of Ovariotomy without a Death," 1886.

"Essays on Evolution" (reprinted).

Selected Contributions.

Proceedings of the Royal Society: "On the Anatomy of the Umbilical Cord" (illustrated), 1876.

Transactions of the Medico-Chirurgical Society: "Case of Cholecystotomy," 1880.

Transactions of the Obstetrical Society: "The Diagnosis of Extra-uterine Pregnancy," 1874; "Note on a Diseased Placenta," 1876; "The Repair of the Female Perinæum," 1879; "Three Cases of Axial Rotation of Ovarian Tumours leading to their Strangulation and Gangrene," March, 1880; "Removal of the Uterine Appendages," June, 1882; "Note on Uterine Myoma: its Pathology and Treatment," July, 1883; "Case of Idiopathic Gangrene of the Uterus," November, 1883; "An Undescribed Disease of the Fallopian Tubes," 1883.

Obstetrical Journal: "Menstrual Irregularities and their Relation to Diseases of the Nervous System," 1873.

British Gynæcological Journal: "Double Uterus—Pregnancy in the Left Half, Hæmatocele in the Right," 1886.

Transactions of the Pathological Society: "Fourteen Specimens of Hydro and Pyo-salpinx," December 6, 1881.

Transactions of the International Medical Congress: "Abdominal Surgery" ii., 229.

British Association Reports: "On the Occurrence of a Sacral Dimple and its Possible Significance," 1878.

Proceedings of the Social Science Congress: "The Utilization of Town Refuse," 1884.

Birmingham and Midland Naturalist: "The Digestive Principles of Plants," 1878.

Transactions of the Birmingham Philosophical Society: "Notes on Bedroom Ventilation" (illustrated), 1880.

Transactions of the Birmingham Natural History Society: "The Structure of Pitcher-plants" (illustrated), 1879.

The Lancet: "Case of Utero-Peritoneal Fistula," May 18, 1872; "Case of Successful Gastrotomy in Extra-uterine Gestation," February 22, 1873; "Metro-Peritoneal Fistula in a Case of Successful Ovariotomy," January 9, 1875; "Twelve Cases in which Dilatation of the Cervic Uteri was accomplished by Elastic Pressure," November 1st, 1879; "Case of Removal of Large Cystoma of Ovary, followed by Disappearance of a Uterine Myoma," April 9, 1881; "The Occurrence of Jaundice as a Symptom of Gall-stone," July 4, 1885; "The Surgical Treatment of Gall-stones," August 29, 1885.

Birmingham Medical Review: "The Medical Education of Women," 1872; "Case of Puerperal Endocarditis," 1876; "Fifty Cases of Ovariotomy," 1878; "Series of One Hundred Ovariotomies with Three Deaths," 1880.

British Medical Journal: "Note on the Cure of Inveterate Eczema in Children by Vaccination," January, 1872; "The Hastings Prize Essay," 1873; "Menstrual Fluid retained in the Left Fallopian Tube, simulating Ovarian Tumour, (Abdominal Section)," May, 1878; "The Staffordshire Knot," November, 1879; "One Hundred and Ten consecutive Cases of Abdominal Section," 1881; "Four Cases of Hepatotomy," 1881; "Remarks on the Diagnosis and Treatment of Chronic Inflammation of the Ovary," July, 1882; "Two Cases of Bleeding Myoma," August, 1882; "One Hundred consecutive Cases of Ovariotomy performed without Listerian Details," 1882; "Two Hundred and Eight consecutive Cases of Abdominal Section, performed between November 1st, 1881, and December 31st, 1882," February 1883; "Recent Advances in Pelvic Surgery," March, 1884; "Five Cases of Extra-uterine Pregnancy, operated upon at the time of Rupture," June, 1884; "Pathology and Treatment of Extra-uterine Pregnancy," August, 1884; "Nine Cases of Successful Operation on Ruptured Tubal Pregnancy," December, 1885; "One Hundred and Thirty-nine Cases of Ovariotomy without a Death," 1886; "Surgical Treatment of Diseases of the Liver," 1886.

Dublin Medical Journal: "Has the Law of Natural Selection by Survival of the Fittest failed in the case of Man?" 1869; "The Myoidema of Phthisis," 1872.

Edinburgh Medical Journal: "Enlargement of the Thyroid Body in Pregnancy," May, 1875; "Successful Case of Gastrotomy in Extra-uterine Pregnancy," July, 1880; "Note on Chronic Inflammatory Diseases of the Uterine Appendages," 1886; "Note on Diseases and Removal of Uterine Appendages," 1886.

Provincial Medical Journal: "A Series of One Hundred and Twelve Operations for Ovarian and Parovarian Cystoma without a Death," September, 1885; "Methods of Diagnosis," June, 1886.

Practitioner: "Climacteric Diabetes in Women," 1886; "A New Method of Administering Ether Vapour" (illustrated).

Medical Times and Gazette: "Notes on the Causation of Labour," December 6, 1884; "On the Treatment of Acute Peritonitis by Abdominal Section," March 21, 1880.

Medico-Chirurgical Review: "On the Treatment of Cleft Palate" (illustrated), 1870; "Periosteal Disease of the Skull," 1870.

American Journal of Obstetrics: Three Cases of Pyo-salpinx," January, 1884; ("Personal Observations on the Works of Lawson Tait," by Vander Veer, July, 1885.)

New York Medical Journal: "Clinical Lecture Delivered at Bellevue Hospital," September 20, 1884.

THOMAS PRIDGIN TEALE,

M.A., M.B., F.R.C.S., F.R.S.

IN Leeds and its neighbourhood the name of Teale is held in deservedly high esteem, for the members of the family bearing it have long been honourably prominent in many useful works in the West Riding.

Mr. Thomas Teale, Mr. Pridgin Teale's grandfather, was in extensive practice as a surgeon in Leeds in the last century; and his son, Mr. Thomas Pridgin Teale (the father of our present subject), succeeded him in practice there. Mr. T. P. Teale, senior, was born on the first day of the present century, and, when but twenty-two years of age, came into prominent notice as a provincial operator. He was actively associated with the foundation and subsequent prosperity of the Leeds School of Medicine, and was a chief contributor to the more than ordinary success of the Leeds Philosophical and Literary Society, of whose Zoological Department he was honorary curator. He was appointed by the Queen a Member of the General Medical Council, on its institution in 1858, and became a Fellow of the Royal Society in 1862. He held important offices in connection with the Leeds General Infirmary for many years, he contributed copiously to medical literature, and he achieved for himself a high reputation among his professional brethren. It was he, also, who originated amputation "by a long and short rectangular flap," now commonly called "Teale's Amputation."

Thomas Pridgin Teale, the son of this well-known medical man, was born in the year 1831. He was educated at the Leeds Grammar School, and afterwards for five years at school at Winchester, under Dr. Moberly, late Bishop of Salisbury. After spending three years at Oxford, he graduated as a Bachelor of Arts of Brasenose College, taking the Mastership of Arts in 1855; and subsequently he went to study at King's College, London. This was the day of Fergusson, Partridge, Todd, and Bowman, of whose teachings Mr. Teale had the advantage. He was clinical clerk to Dr. Todd, and dresser to Mr. Partridge, and later he was selected as clinical assistant to Sir William Bowman at the Moorfields Ophthalmic Hospital, filling the place of Mr. Hulke during his absence in the Crimea. He gained the Membership of the Royal College of Surgeons of England in 1855, of which two years later he was elected a Fellow. He then sought fresh fields of instruction on the Continent, and, after spending a period of six months in visiting Paris and other places, settled in his native town of Leeds. In 1856 (in which year he became a Bachelor of Medicine of

Yours truly

T. Pridgen Teade

the University of Oxford), he was elected to the office of Demonstrator of Anatomy and Lecturer at the Leeds School of Medicine.

After about ten years thus spent in the Anatomy Course, he was appointed Lecturer on Surgery, a position which he resigned after a period of twenty years' service at the Leeds School of Medicine. In 1864, on the retirement of his father and of the late Mr. S. Smith, Mr. Teale was elected Surgeon to the Leeds Infirmary, along with the late Mr. Nunnely and Mr. Wheelhouse, a post which he held for twenty years, retiring (with the last named gentleman) in 1884, when he became Consulting Surgeon. In this capacity he acquires the right to the use of six beds in the hospital. Mr. Teale was likewise for about nine years one of the examiners for the degree of M.B. in the University of Oxford, and in June, 1886, was elected one of the three co-opted members of the First Board of the Faculty of Medicine in that University, established by the new medical statutes.

In 1876, Mr. Teale was nominated one of the Crown Members for England on the Medical Council, and this position he still holds. In 1881 he was appointed by the Medical Council as Visitor, along with Professor Gairdner, of Glasgow, and Professor William Stokes, of Dublin, of the Medical Corporations of the three kingdoms, and in the following year the Report of the Visitors was presented to the Medical Council. He was also President of the Public Health Section of the British Medical Association at the meeting held at Liverpool in the August of 1883, and, in the following October, he held the same office in the Health Section of the Social Science Congress at Huddersfield.

Mr. Teale has long been known as a surgical operator of great brilliance, and many of his reported cases are very remarkable. They are to be found recorded in the medical papers of the last five-and-twenty years, and have contributed in no small degree to the progress of the surgeon's art, for their author's manual skill is united with a speculative intellect and sound judgment which have prompted him to venture successfully upon unbeaten paths, and he has also given currency to many of the opinions and works of other men. Thus, in 1859, he published in the *Medical Times and Gazette*, a case of chronic inversion of the uterus which he successfully reduced by taxis in forty-eight hours, when it had existed for two and a half years, on the plan proposed by Tyler Smith. A year later we find him suggesting for lachrymal obstructions, the use of bulbed probes as an improvement upon Bowman's probe of uniform calibre, a method now almost universally adopted in the formation of lachrymal instruments. Again, when the great Iridectomy controversy was fought out in the *British Medical Journal* by Sir William Bowman, against its opponents—the late Sir William Wylde, Mr. Haynes Walter, and others—Mr. Teale contributed to the *Medical Times and Gazette* a useful paper on the subject.

About the same period he made several contributions to the literature of ophthalmic surgery—one a report of a case whereby he proved that increased tension of the eye-ball, following the extraction of a cataract, may be arrested by puncturing the cornea. He also illustrated the treatment of symblepharon by transplantation of the conjunctiva, which has since become the accepted operation for the relief of that complaint. Again the operation of suction, which is now recognized as the proper method of dealing with soft cataract, was exemplified by Mr. Teale in his paper on "A Suction-curette for the extraction of Soft Cataract," published in the *Ophthalmic Hospital Reports* (vol. iv.), as well as in papers in the *Lancet* and *British Medical Journal*. In another paper published in the *Ophthalmic Hospital Reports* (vol. v.), he cleared showed (by a record of twenty-two cases) that, in a considerable number of instances, Iritis, even of syphilitic origin, may be cured by atropine alone; and in the same volume will be found an account of two cases of cysticercus in the eye, in one of which the cysticercus was discovered by the ophthalmoscope in the vitreous humus, and in the other on the iris, it being excised with the portion of the iris to which it was attached. Before leaving the subject of ophthalmology, it should be stated that in the same *Reports* (vol. viii.), Mr. Teale published a paper on "Median Incision of the Cornea in Acute Corneal Inflammation," being an extension, to more general affections, of Saemisch's operation for serpiginous ulceration of the cornea, abscess in the cornea, diffuse keratitis, etc.

To the *Lancet*, in 1866, Mr. Teale contributed an article on "Lithotrity, Lithotomy, and the Endoscope," wherein a remarkable illustration of the use of that instrument was given, in which small calculi (ten in number) were seen, and then pumped out by Clover's syringe, the patient being thoroughly cured without operation. The endoscope, however, does not seem to have proved of such practical value as was here anticipated. Mr. Teale has recorded in the medical journals many other cases of relief of stone in the bladder, in one of which a calculus eight ounces in weight was removed, the patient recovering without a drawback. At the International Medical Congress of 1881, in a discussion on Mr. Reginald Harrison's paper on "Bigelow's Operation," he expressed an opinion that, in the hands of expert lithotritists, a greater number of recoveries might possibly be made under the operation, but that there was a risk that those who were not specialists in lithotrity might be induced to abandon lithotomy for a proceeding not without dangers of its own, especially in inexperienced hands. He felt, he said, that lithotomy was maintaining a stronger position in reference to mortality, and in comparison with lithotrity, than in former days; and that it had special advantages, such as the better chance it afforded of the cure of cystitis attendant upon, or in some cases causing vesical calculus.

Mr. Teale's large experience in amputations has enabled him to make several valuable contributions to the subject—a letter in the *British Medical Journal* (1868) on "Rectangular Amputations;" a paper read before the British Medical Association at Leeds (1869) on "Rectangular Stumps;" and a clinical essay, contributed to the *Lancet* (1870), "On the Relative Mortality of Rectangular and Non-Rectangular Amputations at the Leeds Infirmary," wherein a comparison was made of the results of operations in eleven years, during which period 183 rectangular amputations took place, with 34 deaths; and 177 non-rectangular amputations, with 58 deaths. He has also made several contributions on "Amputation at the Hip-Joint."

Abdominal surgery is another subject that has greatly occupied Mr. Teale's attention, and a paper which he contributed to the *Lancet*, on "Ovariotomy during Acute Suppuration of an Ovarian Cyst," was full of interest, because it added another case to the small number of those in which the patient—being in extreme danger from inflammation of the sac, the result of tapping—has been rescued from imminent death by ovariotomy. It teaches us not to be debarred from an operation, even of the greatest magnitude, by the most acute and threatening inflammatory disturbances, when such disturbances are the result of a localized lesion in a part admitting of removal. Mr. Teale has also written on ovariotomy *in extremis* and in pregnancy (*Provincial Medical Journal*). He has urged and defended apologetically (*Lancet*, 1875) the opening of the peritoneal cavity as a means of diagnosis in obscure cases threatening life—a principle now almost universally accepted by surgeons; and a year later, in the *British Medical Journal*, we find him advocating the exploration of the abdomen in cases of intestinal obstruction.

It is impossible to enumerate a moiety of the remarkable cases contributed by Mr. Teale to medical literature, but some others must be noted. In a paper in the *Medico-Chirurgical Transactions* (1867) on "Nævus," he contended that many forms of it were really tumours more or less capsulated, and were capable of enucleation or dissection, like ordinary tumours. In the same year, in his Introductory Address at the Leeds School of Medicine, he urged the value of hypodermic injections of morphia in acute disease, as a therapeutic agent, in contrast with its value as an anodyne. At the same period, in a paper in the *British Medical Journal*, he brought together many instances to show that cicatrix, resulting from operation, may at times be utilized or relied upon by the surgeon for the arrest of growth, or even destruction of abnormal structures, or misplaced natural structures. This principle he strikingly illustrated by many cases of nævus. Mr. Teale has also contributed several important papers, which will be found named in the appended Bibliography, on Tracheotomy, Femoral Disease, Restoration of Ruptured Perinæum, and other subjects. In 1876, he published in the *Lancet* a letter on "House Drains and Ill-Health," which led the President of the

Leeds Philosophical Society to press the writer to give his lecture on "Dangers to Health in our own Houses," subsequently expanded into the work, "Dangers to Health," alluded to below. In the same way a clinical lecture on "The Surgery of Scrofulous Glands" was afterwards published in book form, in conjunction with Dr. Clifford Allbutt's lecture on "Scrofulous Neck."

Mr. Teale's work on "Dangers to Health" is styled a "pictorial guide to domestic sanitary defects," and is illustrated by a large number of coloured engravings. Its practical value is attested by the fact that it has gone through four editions in English, besides editions in French and Spanish, and a second edition in German, translated by H.R.H. Princess Christian, is now in the press. The purport of the *brochure*, "Hurry, Worry, and Money"—a Presidential Address in the Health Department of the Social Science Congress, which was printed originally in the columns of the *Midland Medical Miscellany* (*Provincial Medical Journal*)—is sufficiently explained by its title. As the object of all earnest men is to impress the dominant ideas in their own minds on the minds of others, and to convince by stern facts, Mr. Teale has here taken a direct course, and has marshalled his figures and arguments in such an array that conviction must needs be brought home to the minds of all who may read his pamphlet. His language is terse, and he makes his meaning clear, a feature which marks all his writings.

In the lectures of Dr. Clifford Allbutt and Mr. Teale on "Scrofulous Neck," we have, as the *Provincial Medical Journal* observed, "a happy combination—the physician treating his subject from a medical, and the surgeon from a surgical standpoint." In this case, it is true, the lectures are separate, but there is a degree of co-operation which makes the lectures run into one another. Dr. Allbutt introduces the subject, and, after considering what scrofulous neck is, he leads up to the surgical portion, to curative surgery, "to radically extirpate every caseous gland or portion of gland, and so quench promptly the smouldering fire." The surgical aspect of the question is ably treated by Mr. Teale, who brings forward a number of cases to show how far surgery can assist in the prevention of disfigurement. This he has succeeded in doing, proving that by thorough extirpation, by the knife and spoon, of diseased glands, scrofulous neck may be robbed of its unsightliness.

Mr. Teale's reprinted lectures on "Economy of Coal in House Fires," and "The Principles of Domestic Fire-place Construction," were the result of several years' experience, and of a number of experiments. The principles of grate construction advocated are simply these—to arrange the draught so that it shall impinge on and consume the surface of the coal next the room, and not that next the back of the grate, and to arrange the fire bricks so that they shall absorb as much heat as possible from the heated gases, and radiate it into the room. Mr. Teale having noticed the

advantage derived from constructing grates with a fire brick bottom in place of the usual open bars, wished to get a somewhat similar arrangement in an ordinary grate; so he covered in the front of the ash-pit with a piece of sheet iron, so as to prevent access of air to the bottom of the grate. To his surprise, he found that this gave better results than were given by the solid bottom. This, then, is one of his fundamental principles of fire grate construction—to have a close hot air chamber beneath the fire.

Mr. Teale is a Member of the General Medical Council, an Honorary Fellow of King's College, London, and Consulting Surgeon to the Leeds General Infirmary. In 1888 he was selected for the Fellowship of the Royal Society. He married, in 1862, Alice, eldest daughter of the Rev. William Teale, M.A., rector of Devizes.

BIBLIOGRAPHY.

"Dangers to Health; a Pictorial Guide to Domestic Sanitary Effects," 8vo; French Edition, entitled "Dangers au Point de Vue Sanitaire des Maisons Malconstruites;" German Edition, translated by H.R.H. the Princess Christian (second issue in the Press), with preface by Professor Esmarch of Kiel; Spanish Edition, translated for M. Ayrra-Garay.

"Hurry, Worry, and Money; the Bane of Modern Education," 8vo, 1884.

"The Surgery of Scrofulous Glands" (a Clinical Lecture published in conjunction with Dr. Clifford Allbutt's Lecture on "Scrofulous Glands"), 8vo, 1885.

"Economy of Coal in House Fires," 8vo, 1886 (Including a Lecture delivered at the Royal Institution, "On the Principles of Domestic Fire-Place Construction." The lecture has also been issued as a separate pamphlet).

SELECTED CONTRIBUTIONS.

Medical Times and Gazette: "Chronic Inversion of the Uterus reduced by Taxis," August 20th, 1859; "Lachrymal Obstructions treated on Mr. Bowman's Plan," January 7th, 14th, 21st, 28th, 1860; "Iridectomy," 1864; "Enucleation of Nævus," March 10th, 1867; "Amaurosis" (cases), 1867; "Carbolic Acid Treatment of Wounds" (letter), 1869; "Amputation at the Hip-joint" (case), July, 1873; "The Surgery of Scrofulous Glands,' July 10th and 17th, 1885.

British Medical Journal: "Iridectomy," January 2nd, 1864; "Case in which Increased Tension of the Eyeball, following Extraction of Cataract, was arrested by Puncture through the Cornea;" "Extraction of Soft Cataract by Suction," September 23rd, 1864; "Introductory Address to the Leeds School of Medicine" (abstract), October 5th, 1867; "Rectangular Amputations" (letter), November 7th, 1868; "Atrophy induced by Cicatrix, and its Surgical Value," December 11th, 1867; "Stone in Female Bladder" and "Hip Joint," July 23rd, 1870; "Plate of Bone impacted in the Larynx—Removal by aid of Tracheotomy," January 7th, 1871; "Amputation at the Hip-Joint for Malignant Disease of the Femur," July 23rd, 1870; "Cases in which Pneumatic Aspirator was used," December 21st, 1870; "Ether *v.* Chloroform," March 11th, 1872; "Restoration of Ruptured Perinæum," 1873; "On Exploration and Treatment of the Abdomen in Obstruction of the Bowels," January 11th and September 27th, 1879.

Ophthalmic Hospital Reports: "On the Relief of Symblepharon by Transplantation of the Conjunctiva," iii., 253; "A Suction-Curette for the Extraction of Soft Cataract," iv., 197; "On the Relative Value of Atropine and Mercury in Iritis," v., 156; "Cysticercus in the Eye—two cases," v. 318; "Median Incision of the Cornea in Acute Corneal Inflammation," viii.

Report of the International Ophthalmic Congress, London, 1873; "On Symblepharon."

Lancet: "Extraction of Soft Cataract by Suction," September 24th, 1863; "Lithotomy, Lithotrity, and the Endoscope," September 24th, 1866; "Popliteal Aneurism treated by the Method of Mr. Dix, of Hull," June 6th, 1867; "Case of Operation for Fistula of Penis," 1867; "On Rectangular Stumps," 1869; "The Relative Mortality of Rectangular and Non-rectangular Amputations at the Leeds Infirmary," July 11th, 1870; "The Simulation of Hip Disease by Suppuration of the Bursa over the *Trochanter Major*," October 8th, 1870; "The Relief of Pain and Muscular Disability by Acupuncture," April 29th, 1871; "Tracheotomy during threatened Suffocation from Pressure on the Left Laryngeal Nerve by Aneurism of Aorta," 1873; "Ovariotomy during Inflammation of the Cyst—Recovery," June 28th, 1873; "Ovariotomy *in Extremis;*" "Lithotomy," October 10th, 1874; "On Exploration of the Abdomen in Obstruction of the Bowel," March, 1875; "On the Relief of Vesical Irritation and Incontinence in the Female by Dilatation of the Urethra," November, 1875; "House Drains and Ill-health" (letter), August 12th, 1876; "Abscess of the Lung cured by Incision and Drainage," July 6th, 1884.

Medico-Chirurgical Transactions: "Enucleation of Nævus," February 26th, 1867.

Provincial Medical Journal (Midland Medical Miscellany): "Hurry, Worry, and Money," December, 1883, January and February, 1884; "Health and Education," August, 1884; "Ovariotomy during Pregnancy" (four cases, three recoveries), October, 1885.

Jos faithfully
Geo Canfield Clemens

GEORGE DANFORD PHILLIPS THOMAS,

M.D., M.R.C.S.

DR. DANFORD THOMAS, Coroner for Central Middlesex, was born on December 12th, 1846. He is the third son of the late Rev. R. J. F. Thomas, M.A., who, after acting for fifteen years as Head Master of the Drapers' Company's School, London, was inducted into the Vicarage of Yeovil, Somerset, where he received the considerable Masonic appointment of Grand Chaplain of England. This gentleman's grandfather was the late Mr. R. M. Thomas, Her Majesty's Consul at Malta, and Governor of the Virgin Isles.

Dr. Thomas was educated at the Grammar School, Yeovil, and commenced his professional career as the pupil of Mr. W. F. Tomkyns, late of that town, being afterwards a student at the Royal United Hospital, Bath. Subsequently, he entered at St. Mary's Hospital, London, where he diligently pursued his medical studies; and at this period, first as assistant to a medical practitioner, and afterwards as Assistant House Surgeon to the Lock Hospital, he was enabled to maintain himself almost unaided.

In the year 1871 he was admitted a Member of the Royal College of Surgeons of England, and, five years later, after a further course of study and the prescribed examinations, obtained the degree of Doctor of Medicine of the University of Brussels, with honours in Medical Jurisprudence.

During the Franco-German war, Dr. Thomas was actively engaged as one of the surgeons under the Red Cross Society, and distinguished himself by his indefatigable exertions on behalf of the sick and wounded of both armies, running considerable personal risks, not only on the actual field of battle, but, on more than one occasion, in the conduct of ambulance waggons with medical stores and necessaries through the lines, at a time when the Red Cross afforded little or no protection, it being frequently regarded as the badge of espionage by the belligerents on both sides. In a report published by one of the French Committees, M. Labourgarde, President of the Ambulance at Chalons-sur-Marne, thus writes: "I sent on to the front Mr. Thomas, a young English surgeon, who from first to last was valuable to us all, on account of his courage, his self-abnegation, and his affectionate sympathy; he leaves with his ambulance to encounter a thousand dangers." From "Our Adventures during the War," by Misses Pearson and McLaughlin, we also extract the following:—"The

International Society, under Colonel Lloyd Lindsay, may well congratulate themselves on the good services done by Mr. Thomas to the wounded of both nations. His bright, cheerful intelligence, his unselfishness, his indefatigable labour, will, we trust, be rewarded by some better recognition than these few lines of a woman's praise."

Shortly after Dr. Thomas's return from abroad, he commenced practice in St. Mary's Terrace, Paddington, and, in 1874, when twenty-seven years of age, he was, at the suggestion of Dr. B. W. Richardson, F.R.S., nominated by the late Dr. Hardwicke, the then recently-elected Coroner for Central Middlesex, as his Deputy, the appointment being confirmed by the Lord Chancellor. In the following year he was elected by the Willesden Urban Sanitary Authority as Medical Officer of Health for the District, and his printed Reports on its sanitary condition, from 1875 to 1879, have been highly esteemed. Dr. Thomas gained much valuable experience in both these offices, and by availing himself of the opportunities thus afforded, as well as by studying the law as a Member of the Honourable Society of the Inner Temple, he well qualified himself to receive the high honour which the Freeholders of the county of Middlesex, at a comparatively early age, conferred upon him.

By the sudden death of Dr. Hardwicke (who had held the office of Deputy-Coroner and Coroner for nearly nineteen years), Dr. Thomas was plunged, in 1881, at the shortest possible notice, into the heat of a contested election ; but so energetically was he assisted by the members of the medical profession, and so well supported by the Freeholders and by the public generally, that, on the declaration of the poll (which was demanded on behalf of his opponent, Mr. Bolton, a solicitor), he was found to be duly elected Coroner for Central Middlesex by a large and overwhelming majority, the voting being—for Dr. Danford Thomas, 2,043 ; for Mr. Bolton, 361 ; majority for Dr. Thomas, 1,682. Such a majority indicated plainly that the Freeholders of the County were of opinion that the candidate possessing medical qualifications was the right and proper person to inquire into the causes of death ; and it is possible that as the legal candidate has now for the fourth time in succession received a signal defeat, the election of a medical Coroner for Central Middlesex may be a foregone conclusion for the future.

Dr. Benjamin Ward Richardson, F.R.S., in an address made in favour of Dr. Thomas's candidature, set himself to answer, with persuasive eloquence, the question, "Who shall be Coroner?" Ten thousand copies of his address were distributed, which were thought to have had a marked effect on the public mind in guiding the freeholders to a conclusion. After claiming that a medical man is the right and proper person to fill the office of Coroner, Dr. Richardson concluded as follows :—

"We need not dispute about particular men until we get to true principles. In this

case the principle is that a skilled medical man is necessary for recording causes of death ; and that point settled, we come to the man himself. . . . Have you a medical man to support and sustain the line of Coroners—the line of Wakley, Lankester, and Hardwicke—before you? I say you have before you all that you want in Dr. Danford Thomas, who has actually supplemented his claims by the claim of being a member of the Inner Temple, where he has for some time studied law. Dr. Thomas has been for some years the Deputy of the late Dr. Hardwicke ; he has held 1,800 inquests ; he is a thoroughly well-informed man ; he has received a sound, scientific, medical education. We know that he is a man who has learnt the duties specially appertaining to this office of Coroner ; we know that he is assiduous in his work, that he has shown skill in the execution of it, and that he is doubly trained for it. I need not venture another word in urging the cause or the man. The cause is clear enough, it means that you will have science at the head of these solemn investigations, investigations in which is involved so much of the happiness and the morality of the community. The man is before you who will guide those who are less informed than himself respecting the circumstances connected with sudden and untimely death ; who will look beyond the mere routine of his task into the great external, and if I may so call them, the accidental natural causes of mortality ; and who will bring the whole bearing of his sanitary skill and experience to assist him in the labours devoted to your service."

Shortly after the election, on May 11th, 1881, Dr. Thomas was entertained at a public dinner, given in honour of his return as Coroner for Central Middlesex. Dr. B. W. Richardson occupied the chair, being supported by many well-known members of the medical profession, and other gentlemen representing law, science, literature, and art. This occasion was made the opportunity, by a large number of Dr. Thomas's friends, of presenting him with a very handsome silver *épergne*, as a remembrance of his recent success.

Whatever may be the general opinion as to the desirability of a coroner being a medical or a legal official, there can be no doubt that Dr. Thomas fills most excellently the post to which he was elected. He is possessed with a just sense of the duties and responsibilities of his office, whose ancient dignity he has done no little to sustain. It is due to him chiefly that the old system of holding inquests in public houses—a system which has been so justly and severely satirized because of the great abuses to which it has led—has been largely done away with, and he is able to say that, within the last ten years, scarcely a single inquest in Central Middlesex has been in an undesirable place. He has constantly urged upon the several Local Boards the great desirability of some public building been appointed for the coroner's court, and already such places are in use in Clerkenwell, St. Giles's,

Islington, St. Pancras, and Hornsey. During the course of each year it falls to Dr. Thomas's lot to adjudicate in some seventeen or eighteen hundreds of cases, besides his private consideration of three or four hundred reports when no inquest is held. In all these matters his judicial character, his knowledge of the value of evidence, and his swift grasp of facts, are truly remarkable. The court which he holds is the scene of many a pitiable spectacle, but his courteous, affable, and gentle manner with the witnesses, and his prompt and business-like dealing with the jury, do much to make smooth the pathway for those whom affliction brings into his presence. The reports of many of Dr. Thomas's cases read like a romance ; but they are so sad withal that one gladly escapes the perusal. The quiet and indefatigable work of the coroner for Central Middlesex, which renders it practically impossible for any doubtful case to go uninvestigated, has doubtless contributed to give a sense of security from danger of violence to the population of London.

His great knowledge of medico-legal and ethico-legal questions causes Dr. Thomas's help to be sought in many quarters, and his experience has been of much service in many public and private circumstances. Amongst his other work it may be mentioned that he is the author of most of the medico-legal annotations in the *Provincial Medical Journal*, which are notable for their accurate and just criticism of passing events.

Dr. Thomas has always striven to use his opportunities for the public good, and, both by precept and example, has laboured to raise the moral and social condition of the people, a work for which his special knowledge of the depressed states of society, and of sanitary and hygienic matters, especially fits him. One important movement touching the welfare of the medical profession which he was largely concerned in promoting, took shape in the "Medical Union Society," established, in 1882, by a number of gentlemen interested in the well-being of the junior members of the profession, with the object of supplying them with a social centre, and with a means of intercommunication and organization which had long been greatly needed. For this purpose a suite of apartments, including Reading, Writing, Conversation, and Smoking Rooms, was engaged in Adelphi Terrace, where many debates were held and soirées given, and which it was hoped would become the natural head-quarters of every students' association, and of all undertakings for the advantage and well-being of the younger members of the profession. Of this society Dr. Thomas was treasurer, and he was constantly working for it as a member of the executive committee, but despite his earnest endeavours, the divergent interests which it had been sought to reconcile, led to its dissolution, when it had been in existence, doing much good work, for a space of three years. The movement, however, did permanent service by calling attention in a practical way to the need which existed for a watchful

care being exercised over the welfare of students, at seasons when they were beyond official control, and at the present time several of the hospitals have established similar societies for the students attending their respective medical schools.

Dr. Thomas has also taken an active part in the work of the Medical Defence Association, as well as in the efforts of the Association of Members of the Royal College of Surgeons of England to secure a direct representation of their body upon the Council of the College. At the General Meeting of the College in 1885 a resolution, embodying the claims of the members to a share in its direction, was passed by a large majority; and again at the meeting in November, 1886, a similar resolution was brought forward, which was proposed by Mr. Timothy Holmes, one of the Fellows. The Association of Members selected Dr. Thomas, of their number, to be its seconder on the occasion, and in the speech which he made he forcibly argued the question. The Members, he said, were an integral part of the College, and their claim was a just and natural aspiration. They were Members, not because they paid a certain sum of money for the diploma, but because after four or five years of continuous study, and the examinations undergone by them, they had a right thereto, which left the Council no discretion in the matter. "Was it unnatural, or to be wondered at, that, as properly constituted Members of a corporate body, they should expect to take some part in its government, in its proceedings, and in the election of its Council?" Through the Members, he concluded, the College had obtained most of its wealth, and most of its dignity, and all of its position and importance. The resolution was carried with few dissentients, and another, calling upon the Council to concoct measures to give effect to it, without any.

At the General Election of 1885, Dr. Thomas, at the request of over 1,000 of the electors of the newly-formed district of West Islington, came forward as a candidate in the Conservative interest, to oppose Mr. Richard Chamberlain, who represented the Liberal party. It was not expected, from previous experience, that a Conservative candidate would be returned, but Dr. Thomas waged a strong fight, and, when the poll was declared, his votes numbered but a few hundreds less than those of his opponent. The contest was carried on with the greatest good feeling on both sides, and was probably more amicable in character than any other in the metropolitan area. At the close, Dr. Thomas was presented, by the local Conservative Association, with an illuminated address, thanking him "for his response to the invitation of the electors to contest, in the Conservative interest, the first Parliamentary representation of the Western Division of the Borough of Islington; also for his untiring and unceasing efforts to promote and sustain constitutional principles, and for his spirited and able conduct throughout the campaign."

Dr. Thomas is a Member of the Honourable Society of the Inner Temple, of the

British Medical Association, of the Harveian Society, and of the Society of Medical Officers of Health, as well as Surgeon to the 18th Middlesex Volunteers. He is likewise a Member of the Council of the Sanitary Assurance Association, and has served for many years on the Paddington Vestry, and also as Chairman of its Sanitary Committee. He has read many valued papers on questions touching the Public Health, of which several may be mentioned: "On the Present System of Registration of Deaths, with suggestions for its improvement" (Society of Medical Officers of Health); "On Certain Forms of Contagious Diseases, with suggestions for extended Legislation regarding them" (West End Debating Society); and "On State Medicine and the Public Health Act, 1875" (Dorchester Farmers' Club). His writings have been chiefly confined to official reports and journalistic annotations.

Dr. Thomas married, in 1872, Sara de Horne, second daughter of the late Joseph Vaizey, Esq., of Stafford, Dorset, and Halstead, Essex, by whom he has one son.

Yours very truly
Frederick Treves

FREDERICK TREVES,

F.R.C.S., F.Z.S.

FREDERICK TREVES, the subject of this sketch, was born in the year 1853, and received his education at the Merchant Taylors' School. Thence he proceeded to the London Hospital, where his student-life was distinguished by untiring energy, and gave unmistakable promise of a successful medical career. It was while yet a student that he made his first contribution to professional literature, in a paper, contributed in 1872 to the *Pharmaceutical Journal and Transactions*, on the "Relation between the Odour of Gases and their Power of Resisting Liquefaction." He took the licence of the Apothecaries' Society in 1874, became a Member of the Royal College of Surgeons of England in 1875, and gained the Fellowship of the College by examination in 1878. After having acted as Surgical Registrar to the London Hospital for some time, he was appointed Assistant Surgeon and Senior Demonstrator of Anatomy there in 1879, and he became Surgeon to that institution in 1884.

In connection with medical science Mr. Treves holds a distinguished position, and is prominent alike in the kindred branches of anatomy, pathology, and surgery. His power of physical endurance is surprisingly great, and his energy is commensurate with it, so that he has been enabled within a few short years, to cover an immense field of work. Rising daily at five and writing until breakfast, before the busy work of the day begins, his contributions to professional literature are already very numerous, and it is doubtful whether any medical man of his age has published more than he. Mr. Treves possesses likewise rare skill as a draughtsman, and the exquisite minuteness and care of his microscopical drawings has stood him in good stead on more than one occasion. Several of his early contributions dealt with important subjects, such as the Functions of the Frontal Lobes of the Brain, illustrated by a remarkable case of injury.

Mr. Treves is probably the only man of his age who has ever held two professorships at the Royal College of Surgeons of England. In 1881 he was elected Erasmus Wilson Professor of Pathology, and subsequently became Hunterian Professor of Anatomy. He lectured at the Royal College of Surgeons on "Scrofula," and was awarded in 1881 a prize of thirty guineas, on the report of the Erasmus Wilson Committee, for a lecture on the Pathology of Scrofulous Affections of the

Lymphatic Glands. Mr. Treves's experience of scrofulous disease has been great, for he was a resident medical officer at the Scrofula Hospital at Margate for one year. On this subject he published in 1882 his well-known book on "Scrofula and its Gland Diseases," a work founded on the principles enunciated in the lecture alluded to above. The book embodied the results of Mr. Treves's investigations at the Margate Infirmary, and was based upon a very considerable collection of clinical and pathological data. It endeavoured to establish the precise position of the disease and its relations to tubercle, as well as to give a new picture of its clinical being. The author bestowed a vast amount of labour upon this work, and all the illustrations, which were original, were drawn by himself. The book was well received, and has been extensively quoted by all subsequent writers upon the subject; and it was immediately pirated in America. "Mr. Treves," the *Lancet* says of it, "has produced a work of which we may feel justly proud. The clinical portion of it fully sustains the reputation English surgeons have acquired in this department of scientific observation, whilst the chapters devoted to the consideration of the pathology of the disease lead us to hope Mr. Treves will soon have more followers in this field of original research." Mr. Treves also wrote the article on "Scrofula" for the last edition of Holmes's "System of Surgery," and a paper on "Tubercle: its Histological characters, and its relation to the Inflammatory Process, as shown in Tuberculosis of the Lymphatic Glands," will be found in the Transactions of the International Medical Congress of 1881. A long correspondence in the *Lancet* followed upon a paper which he read in that year before the Royal Medical and Chirurgical Society, on the condition of large arteries after ligature with catgut, under antiseptic and non-antiseptic measures.

Mr. Treves has laboured earnestly in practical anatomy, and his endeavours to make himself a sound anatomist have been rewarded with an amount of success which must prove highly gratifying to him. His "Manual of Surgical Applied Anatomy" was published in 1883, and sold largely both in this country and in America. It is an excellent *résumé*—for the use of senior students and practitioners—of the most important anatomical facts of surgical significance, wherein the author has exercised admirable judgment, both in his choice of such facts, and in estimating their comparative value to the surgeon. "It is certainly," said the *Edinburgh Medical Journal*, "one of the best books on the subject with which we are acquainted."

To the department of surgery itself Mr. Treves has also given great attention and earnest work, devoting much time to the abdomen and intestines, and he is doing some of the largest operations on the abdomen with extraordinary success. In the year 1884 he gained the Jacksonian Prize at the Royal College of Surgeons of England for an essay on "Intestinal Obstruction," founded upon a great mass of data, and upon which he had spared no pains. The essay, which has been published in

book form, was well received by the reviewers, and probably gives for the first time a complete account of the pathology and clinical features of the disorder. A paper by Mr. Treves, which will be found in the *Transactions* of the Royal Medical and Chirurgical Society, on "Excision of Portions of the Intestine," attracted very great attention. "In Mr. Treves's paper on 'Excision of Intestine,'" said Sir Spencer Wells, addressing the Midland Medical Society at Birmingham, "you will see how firmly an operator of to-day is taking his stand on the true principles of abdominal surgery, which we have watched emerging from their obscurity. He does not ignore the teachings from experiments upon animals. He traces the failures, in many operations of the same kind on the human subject, to faults in the details, such as want of perfect adaptation and insufficiency of sutures. And he lays down as rules for his own action that he must separate the peritoneum from the other tissues, introduce abundance of sutures after Lembert's method, bringing the two serous surfaces together, and avoiding the mucous membrane with the needle."

In another remarkable paper, which he read before the same Society, he advocated the direct treatment of some forms of spinal caries by cutting down upon the actual seat of disease in the spine. The gravity of spinal caries, he thinks, depends not so much upon any special pathological features, as upon the depth at which the disease is situated, and its inaccessibility to the operative processes usually applied to caries elsewhere. In his operation the anterior surfaces of the bodies of all the lumbar vertebræ and—with reservation—of the last dorsal vertebra can be reached from the loin. A vertical incision is made near the outer edge of the erector spinæ; the sheaths of that muscle and of the quadratus lumborum are cut through; the psoas is incised, and the vertebræ reached by continuing the operation along the deep aspect of that muscle. They can thus be readily examined, carious and necrosed bone removed, and a direct exit given to the morbid products. Again, an abscess situated in the psoas muscle, or in the lumbar region, can be evacuated while it is yet small; and, if a large psoas or lumbar abscess exist, it can be evacuated at its point of origin, and at a spot which, in the recumbent posture, corresponds to its most dependent part. Mr. Treves recorded in his paper three successful cases in which he performed the operation. In one he evacuated, at its point of origin, a psoas abscess containing forty ounces of pus, and removed from the body of the first lumbar vertebra a large sequestrum measuring one inch by half an inch, the immediate improvement in the patient's condition being marked, and the case resulted in a perfect cure. The notion of taking away portions of the spine was quite novel. In another case the psoas abscess had been opened in the thigh some months previously. By Mr. Treves's operation a counter opening was made at the point of origin of the abscess from the lumbar spine, and the entire abscess cavity was drained by a tube passing

from the origin of the psoas muscle to its insertion, This remarkable paper was very well received, and a whole evening spent in discussion of it. A correspondence also followed in the medical papers.

Mr. Treves's lectures at the Royal College of Surgeons as Hunterian Professor, in 1885, were on the Anatomy of the Peritoneum and Intestinal Canal in Man. These lectures were founded upon the dissection of no less than one hundred human bodies, all the dissections having been done by Mr. Treves himself. Published in a handsome volume, they have been well received by reviewers on all sides, from the *Saturday Review* to the usual medical journals. Mr. Treves claims that he has here re-written the account of the intestinal canal. He had long been convinced that a study of this part of anatomy was rendered liable to many fallacies when conducted in dissecting-room subjects in whom decomposition had advanced, and in whom some displacement of parts might be expected; and therefore he was careful to examine, before the usual necropsy, the bodies of patients who had died quite recently, at the London Hospital, of other than abdominal disease. His researches were distinguished by the greatest accuracy of fact and observation, and he was able to dispose of many fallacies. For example, the results deduced from his investigations upon the relations and connections of the cæcum, and the sigmoid flexure, were entirely at variance with the statements of the anatomical text-books, which are a tradition carried down from book to book, and from lecturer to lecturer, for many generations unquestioned.

The Hunterian Lectures, delivered by Mr. Treves in 1886, were on "The Anatomy of the Intestinal Canal in the Mammalia," and were founded upon the careful personal dissection of over two hundred different species of mammals. These dissections were made chiefly at the Zoological Gardens, and Mr. Treves is probably the only man who has injected an adult rhinoceros and made a systematic necropsy of it. The animal, it may be remarked, was cut up, and the portions kept in large tanks until they were finished. Mr. Treves also obtained access to the great collection of preserved animals at the College of Surgeons. It need hardly be said that this investigation on the intestinal canal in the mammalia was conducted by him with the greatest care, and that the result is replete with interest both for the biologist and the medical man. These dissections are illustrated by a large number of most exquisite drawings, distinguished by the utmost accuracy, from the lecturer's own hand. Since delivering this valuable course of lectures, Mr. Treves has resigned the Hunterian Professorship.

The latest distinct work which he has undertaken is a "Manual of Surgery," in three volumes, of which he is editor, each article being written by a surgeon of repute in his special department. Mr. Treves obtained for this purpose the assistance of

thirty-three professors of surgery in England, Ireland, and Scotland, who contributed to the work some sixty concise but comprehensive articles on selected topics of chief moment to practitioners. Mr. Treves has elsewhere written copiously on surgery, especially on Hernia, Intestinal obstruction, Scrofula, Perforating Ulcer of the Foot, Air in Veins, etc., and he wrote monographs on Diseases of the Head, and Diseases of the Spine, for Ashhurst's "Encyclopædia of Surgery." He is also the author of a Quarterly Summary of Surgery in Europe for the *International Journal of the Medical Sciences*, edited by Dr. Minis Hay, of Philadelphia, and Mr. Malcolm Morris, of London; and of an annual article on General Surgery for the "Year Book of Treatment."

Mr. Treves is a Lecturer on Anatomy at the London Hospital, where he has from seventy to eighty beds under his charge. He is a remarkable clinical teacher, and his clinical class is one of the largest in London. A great number of his most interesting cases will be found scattered through the columns of the medical journals, illustrating excision of the tongue, obstruction of the intestine, hernia at the seat of an artificial anus, permanent supra-pubic drainage of the bladder, and many other points. Mr. Treves is himself a bold surgeon, but to the boldness of the operator he unites the caution of a careful thinker; and his application of anatomical principles to surgical practice makes his surgical demonstrations of the utmost value to his students. He arranged not long ago an important and highly useful addition to the Museum of the London Hospital, in the shape of a complete series of duplicate bones on which he accurately mapped the attachments of every muscle connected with them, the whole forming a very beautiful and complete osteological series.

In the year 1882, Mr. Treves was elected by the University Court an Examiner in Anatomy of the University of Aberdeen, and he is at present an Examiner at the University of Durham. He has for several years lectured with great success at the London Hospital Training School for Nurses, on "Elementary Anatomy and Surgical Nursing," treating the subject in a lucid and practical way. He has also long been a prominent member of the British Medical Association; he acted as Secretary of the Pathological Section at the Worcester Meeting in 1882; at the Cardiff Meeting of 1885 he introduced the subject of "Operative Interference in Intestinal Obstruction;" and in the same year he opened a discussion on "The Treatment of Obstinate Constipation," at a meeting of the West Somerset Branch. He is also a Fellow of the Royal Medical and Chirurgical Society, and a Member of the Pathological, Clinical, and Harveian Societies of London.

BIBLIOGRAPHY.

"Scrofula and its Gland Diseases," 8vo, 1882.

"A Manual of Surgical Applied Anatomy," 8vo, 1883, etc. (three editions.)

"Intestinal Obstruction," 8vo, 1884.

"Anatomy of the Intestinal Canal in Man," 4to, 1885.

Editor of "A Manual of Surgery," 3 vols., 8vo, 1886.

Selected Contributions.

Lancet: "The Functions of the Frontal Lobes of the Brain," 1878; "Strangulated Congenital Umbilical Hernia," 1881; "Excision of the Tongue," 1882; "Perforating Ulcer of the Foot," 1882; "Forms of Intestinal Obstruction that may follow after Hernia," 1884.

British Medical Journal: "The Entrance of Air into Veins," 1883; "The Element of Pain in Intestinal Obstruction," 1884; "The Treatment of Intussusception," 1885; "The Anatomy of the Intestinal Canal in the Mammalia," 1886.

Holmes's System of Surgery: "Scrofula," (3rd edition, 1883.)

Ashhurst's Encyclopædia of Surgery: "Diseases of the Head" and "Diseases of the Spine," 1882 to 1886.

Book of Health: "Clothing in its Relation to Health." Edited by Malcolm Morris.

Heath's Dictionary of Surgery: "Hernia;" "Intestinal Obstruction;" "Surgery of the Intestines;" "Diseases of the Lymphatics;" "Air in Veins."

Transactions of the Royal Medical and Chirurgical Society: "Resection of Portions of Intestines," 1883; "The Direct Treatment of Psoas Abscess with Caries of the Spine," 1884; "The Treatment of Acute Peritonitis by Laparotomy," 1885.

Transactions of the International Medical Congress, 1881: "Tubercle: its Histological Characters, and its Relation to the Inflammatory Process, as shown in Tuberculosis of the Lymphatic Glands," i., 298.

Yours truly

Edward Walker

EDWARD WATERS,

M.D., F.R.C.P., F.K.Q.C.P.I., J.P.

DR. WATERS is the second surviving son of the late Mr. Thomas Waters, of Tutshill House, Gloucestershire, and Sarnau, Carmarthenshire, in which latter county he was born on June 20th, 1813. When but five years of age his father died, leaving the care of seven children to his widow. Dr. Waters' medical education, previous to graduation, was conducted chiefly in Edinburgh, under Sir R. Christison, Sir J. Y. Simpson, Syme, Hughes Bennett, Goodsir, and others. He filled the offices of Clinical Clerk to the University Wards, and of Resident Physician to the Royal Infirmary, Edinburgh, and he was also Pathologist's Assistant to the late Professor Hughes Bennett in the same hospital. In the year 1845 he was elected Senior President of the Royal Medical Society in that city.

He graduated at Edinburgh in 1847 as University Gold Medallist, having gained that honour by his Thesis on Fever. The award of gold medals for Prize Theses, which had fallen into abeyance, was thus revived, and has ever since been continued. Sir Robert Christison and Professor Hughes Bennett were in the constant habit of referring to this thesis in their clinical lectures. After further study in Paris—where, in 1848, he was made President of the Medical Society—in Vienna, and in other Continental schools, Dr. Waters settled in practice as a physician in the cathedral city of Chester, where he is now Consulting Physician to the Infirmary. During his residence abroad he was made an Honorary Member of the German Medical Society. His Fellowship of the Royal College of Physicians of Edinburgh dates from 1848. In 1859, he was elected President of the Lancashire and Cheshire Branch of the British Medical Association, an honour which was renewed by his election in 1884 to the same post, this being so far the only instance in which the proud distinction has been twice conferred upon the same person. During the year mentioned (1859), when the Annual Meeting of the British Medical Association was held in Liverpool, under the presidency of the late Dr. Vose, Dr. Waters was appointed to read the Address in Medicine. He was elected President of the British Medical Association in 1866, and was instrumental in promoting the holding of the next Annual Meeting in Dublin, when he resigned the chair to the late Dr. Stokes, under whose able guidance the Association for the first time met in Ireland. The advantage following this extension of the influence of the Association to the sister island has been strikingly exemplified

by the subsequent successful meetings in Cork and Belfast; and the Association again met in Dublin in 1887, under the presidency of Dr. Banks, Physician-in-Ordinary to Her Majesty the Queen in Ireland.

In 1867 Dr. Waters was elected an Honorary Fellow of the King and Queen's College of Physicians in Ireland, and, in 1882, he became President of the Irish Graduates' Association. In 1887 he was granted the Honorary Degree of Doctor of Medicine by the University of Dublin, when H.R.H. Prince Albert Victor, the Lord Lieutenant, Sir James Paget, Bart,, and other distinguished persons also received honorary degrees.

Dr. Waters' life, as will presently be seen, has been devoted to one great object—the promotion of Medical Reform, in order to improve the position of the profession to which he belongs. On May 28th, 1867, the Council of the British Medical Association nominated a Sub-Committee to consider the means of obtaining the representation of "the great body of the profession" in the Medical Council in any alteration of the Medical Act of 1858, and of this Committee Dr. Waters was appointed Chairman. From that time until the meeting of the Association at Brighton, in August, 1886, Dr. Waters unswervingly devoted himself to this cause of medical reform. From 1867 to August, 1886, a period of nineteen years, he was annually re-appointed Chairman of the Medical Reform Committee, and annually reported to the Association on the work of the Committee in promoting direct representation of the profession in the General Medical Council, and the compulsory enforcement of the threefold qualification in Medicine, Surgery, and Midwifery, as necessary to registration. The history of the long-continued struggle was succinctly detailed in the report of the Medical Reform Committee to the Association, in August, 1886. In the first instance the work of the Association was limited to the attainment of the direct representation of the general body of the profession in the General Medical Council. This was the special work delegated to the Sub-Committee appointed in May, 1867, which reported accordingly, at the Annual Meeting held in Dublin in the same year, as to the best method of accomplishing the object, when the Report may be said to have been unanimously adopted. In July, 1868, in pursuance of the instructions of the Association, a deputation waited on the General Medical Council, and submitted the resolution passed in Dublin in favour of direct representation, but without any other result than a fruitless discussion on the subject in the Council. We learn from the Report referred to that, at the ensuing Annual Meeting of the Association at Oxford, the Sub-Committee of the Council was enlarged by the addition of an equal number of members of the Association who were not members of the Council, and the Direct Representation Committee was thereby changed into a Committee acting directly under the Association, in place of being a Sub-Committee of the Council of the Association.

At the Annual Meeting held at Newcastle in 1870, the Government Medical Bill, in charge of the Marquis of Ripon and of the late Rt. Hon. W. E. Forster, having been withdrawn, the Direct Representation Committee was changed into the Medical Reform Committee of the Association, with instructions to promote a complete Medical Act Amendment Bill on its behalf, whereby a far more extended and more arduous sphere of work was assigned to it, and that at a period when the income of the Association barely balanced the expenditure, and when there were no funds available for the payment of Parliamentary agents and draftsmen.

The action of the Direct Representation Committee had now, continues the Report, compelled a recognition of the power wielded by the Association. Other parties were, however, encouraged to enter the field, and rival Bills were proposed without any real support. Year after year the action of the Association was thus greatly embarrassed, and its power, in some degree, reduced. The labours of the Medical Reform Committee, however, were annually endorsed and approved, the Committee was as regularly re-appointed, and the struggle was unceasingly maintained, though under the most discouraging circumstances, in consequence of the opposition to direct representation made by members of the General Medical Council, and by others. Notwithstanding opposition, the Medical Reform Committee, strong in the consciousness of the justice and need of its work, continued its labours until, after many years, in 1879, during the Government of the late Lord Beaconsfield, the whole subject was referred to a Select Committee of the House of Commons. This Committee sat during the sessions of 1879 and 1880, and had nearly closed the evidence when Parliament was suddenly dissolved. It is an open secret, according to the recent Report upon which we rely for these facts, that the Select Committee would have reported in favour of direct representation, and of the examination of all members of the profession in Medicine, Surgery, and Midwifery, before their admission to the *Medical Register*. Dr. Waters was subjected to a searching examination before the Committee by the opponents of the principles advocated by the British Medical Association, his evidence being ably supported by Mr. Ernest Hart, the editor of the *British Medical Journal*, and the Reverend Dr. Haughton, of Dublin, representative of Trinity College in the Medical Council—both active members of the Medical Reform Committee.

A Government, under the premiership of Mr. Gladstone, replaced that under Lord Beaconsfield, with Earl Spencer as Lord President of the Privy Council, and Mr. Mundella as Vice-President. In 1881, these ministers received the Medical Reform Committee as a deputation from the Association, and the Lord President subsequently obtained the appointment, by Her Majesty, of the Royal Commission presided over by the Earl of Camperdown. The Report of the Medical Reform Committee,

submitted to the Jubilee Meeting of the Association at Worcester, in 1882, showed that the Royal Commission had reported in favour of all the points which the Association advocated, and the Committee were instructed to request the Government to frame a Bill on the basis of the Report. With this object, the Medical Reform Committee were, on November 20th, 1882, presented to Lord Carlingford and Mr. Mundella, by His Grace the Duke of Westminster, and Lord Carlingford, in 1883, carried a Bill through the House of Lords, which, however, failed in the Commons.

The same fate happened to the Bill in 1884. The Government failed to carry it through the Commons, although the leaders of the Opposition and the great mass of the members were in favour of it. The impediments in the way of any Bill which affected the privileges and interests of the Universities and Corporations were, by sad experience, proved to be well-nigh insuperable; and Lord Carlingford, abandoning, in consequence, the Bill of 1883 and 1884, drafted a less ambitious measure in 1885, which, owing to the change of Government, was not proceeded with. The strong opinion formed by the majority of the Royal Commission in favour of Direct Representation enabled the Government to propose these Bills which, for the first time, contained provisions for the direct representation of the medical profession in the Medical Council. Dr. Waters underwent examination for an entire day, as representing the British Medical Association, before the Royal Commission presided over by Lord Camperdown.

On the supersession of the temporary Government under Lord Salisbury, Mr. Gladstone assumed the reins of power, and the Medical Reform Committee lost no time in again urging the pressing need of medical legislation, and specially dwelt on the increased power which the Association had acquired through the presence of several members of the profession, including the President of the Council of the Association, in Parliament, and through the appointment of Select Committees of the House of Commons on the subject, followed by that of the Royal Commission. Reference was also made to the familiarity of the Lord President and Vice-President of the Privy Council with all the details of the question. A hope was likewise expressed that any Bill that might be undertaken would be introduced in the House of Commons instead of, as previously, in the House of Lords. Following on these representations, Sir Lyon Playfair drafted a Bill which was confidentially laid before the Medical Reform Committee and generally approved. The Bill was subsequently submitted to the Council of the Association with a similar result.

In the passage of this Bill through Committee of the House of Commons, the number of direct representatives for England, through the initiative of Dr. (now Sir Walter) Foster, M.P., the President of the Council of the Association, was increased from two to three, and, in Clause 10 of the Bill, provision was made for the increase of

the number of direct representatives under certain contingencies. The Act having received the Royal assent, the direct representation of the profession was established, the first election under its provisions taking place in November, 1886. The Act further provides that no one shall be admitted to the *Medical Register* who has not been examined, under the supervision of the Medical Council, in medicine, surgery and midwifery.

The realization of these two points, so long contended for, by the Medical Act of 1886, constitutes a decided advance in medical legislation, and establishes a greatly improved position for all who may seek still further to ameliorate and elevate the medical profession. Dr. Waters has never ceased to contend for the improvement of the general education of all who intend to enter the medical profession, and has forcibly contrasted the defective general education of the medical student of the United Kingdom with that which is enjoined in France and Germany. He would insist that all examinations under this head should be withdrawn from the medical corporations, and confided to civil service examiners. He is strongly of opinion that this would do more than aught else to raise the profession in the social scale.

It is a matter of pride to Dr. Waters that he was able to preside over a Committee including several Presidents and Vice-Presidents of the Council of the British Medical Association, with a number of its most prominent members, for a period of nineteen years, maintaining an unbroken front before the powerful opponents in the profession, and in former Governments, with whom the Committee had to reckon. The struggle, however, was not continued so long without sad and heavy losses occurring in the ranks of those who maintained it; Sibson, Charlton, Southam, Falconer, Wilkinson, Stewart, Hughes Bennett, and Chadwick, have one and all passed away, leaving cherished memories and bright examples behind them.

The services of Dr. Waters in connection with Medical Reform have not been allowed to pass without recompense. At a numerously attended meeting of the Council of the British Medical Association, held in Exeter Hall, Strand, on Wednesday, May 21st, 1886, Dr. (now Sir Walter) Foster (President of the Council) proposed "That the Gold Medal for Distinguished Merit of the British Medical Association be awarded to Dr. Waters for his long-continued, self-denying, and able services in the cause of Medical Reform." The resolution was seconded by Dr. Bartolomé, and carried, Dr. Foster taking the responsibility of seeing it brought into effect at the ensuing meeting of the Association at Brighton.

On this resolution the *British Medical Journal* of July 31st, 1886, published an article, from which we make an extract:

"The meeting at Brighton will be brightened with some very agreeable incidents. . . . . The highest honour which it is in the power of the Association to bestow is its Gold Medal for Distinguished

Merit. No honours can be more valued by a professional man than those which are conferred on him by his peers. . . . . It must be to Dr. Waters a source of unfeigned satisfaction that his long self-sacrificing and devoted labours on behalf of the cause of medical reform have been at length crowned with a large measure of success, and that the Council of the British Medical Association have responded to an unanimous resolution of the Medical Reform Committee, ascribing to Dr. Waters the chief merit of this success, by voting to him the blue riband of the profession. . . . . Few can have any idea of the sacrifices of energy, time, patience, and money which Dr. Waters has made to fulfil the trust which the Association laid upon him, and to carry the burden which it annually renewed. It needed unfaltering perseverance, unshaken trust, and an ever present sense of duty to persevere, year after year, in the long journeys, the continued interviews, the reasoning, the negotiations, the varied strain connected with each renewed effort, and ending, year after year, in the most vexatious disappointments and unexpected failures. The cheery courage, the loyal determination, the good-tempered patience, and the intelligent diplomacy, have at length been rewarded by a success snatched amid circumstances of great difficulty and uncertainty. Dr. Waters has fully realized the conditions of high, arduous, and disinterested service to the profession; and his merit is, at least, as signal as the manner of its recognition."

These words were succeeded by the presentation of the Medal to Dr. Waters at the meeting of the British Medical Association at Brighton, on Thursday, August 12th, 1886. Sir Walter Foster, President of the Council, speaking on the occasion, said:

"In 1857, this Association sprang first into an almost national importance by the part it took in obtaining the first Medical Act. You know that Medical Act was found to be in many respects imperfect, and for twenty-five years or so we have been grumbling at the imperfection of the Act, which we found, three or four years after it was passed, did not answer our expectations. During the whole of that quarter of a century this association, through its Medical Reform Committee, has been endeavouring time after time to obtain an amendment of the Medical Act of 1858. During the whole of this time we have had a Committee of this Association doing quiet, steady, unobtrusive work on your behalf, and over that Committee has presided a gentleman who, when our fortunes seemed darkest, when hope seemed most distant, when Medical Reform seemed a mere vain fancy on the part of a few enthusiasts, has never lost heart, has never lost courage, has never failed of industry. Through the whole there has been one man ever hopeful, ever earnest, ever energetic, and that man was Dr. Edward Waters. At last, in the Parliament that ended a few weeks ago, Dr. Waters was able to get introduced by the Government a Bill, which, although imperfect in many details, and which did not rise to the level of what enthusiasts of Medical Reform wished, nevertheless contained in it two of the great principles for which he had fought so earnestly and so well. It was watched with care till it was finally got through the House of Commons, but through the whole of the critical stages of the Bill, when dangers loomed largest, when perils were nearest to us, Dr. Waters was always at the right hand of the representatives of the Government, and of the Medical members of the House, to give them counsel as to what to yield and what to demand, so that we owe to him very largely the final success which crowned the efforts of the Medical Reform Committee, after twenty-five years of long-continued and self-denying service."

Sir Walter Foster then read the resolution of the Medical Reform Committee, which was in these terms:

"That this Committee cannot conclude the labours of this session, in which the Medical Amendment Act of 1886 has been obtained, and the principles of direct representation and complete qualification of medical candidates for registration have been successfully affirmed, without expressing its appreciation of the self-sacrificing and devoted labour and able effort which Dr. Waters, Chairman of this Committee, has for a long

series of years placed at the service of the profession. It offers to him its hearty congratulations and its thanks for the courtesy and distinguished ability with which he has conducted its work and presided over its meetings. It desires that this resolution be submitted to the Council, together with an expression of the opinion of the Committee that it hopes the Council will consider the best means of affording signal public recognition of the consistent and continuous services of Dr. Waters to the Association and to the profession in securing this measure of Medical Reform."

The Gold Medal of the British Medical Association was then presented by the President, Dr. Withers Moore, to Dr. Waters, who, in replying, gave some particulars of his personal share in the work so successfully accomplished.

Honours rarely come singly, and this dictum is strikingly verified in the case of Dr. Waters. The British Medical Association is not the only medical body with which he is connected. There is in Chester a flourishing medical society, of which Dr. Waters was elected first President. Last year Mr. Taylor, the Senior Surgeon of the Chester Infirmary, filled the post, and while he was President a resolution was passed, asking Dr. Waters to sit for his portrait. This proposal of a testimonial was subsequently extended to the general public, and at a public meeting held in Chester, a Committee was appointed for the purpose of carrying it out. The subscriptions to this testimonial surpassed expectation, and were contributed by all classes. In March, 1887, the presentation of the portrait of Dr. Waters by Frank Holl, R.A., and of a purse of £296, was made by the Duke of Westminster, K.G., in the presence of a large and distinguished gathering in the Chester Town Hall. In June of the same year, at the annual meeting of the Lancashire and Cheshire Branch of the British Medical Association at Stockport, a beautifully illuminated address, with a large silver tray and several valuable pieces of plate, was presented to Dr. Waters by Dr. Ball, the President, on behalf of numerous professional friends and admirers.

On the resignation of Dr. Waters, in 1875, of the post of Physician to the Chester Infirmary, the following resolution, indicative of the estimation in which his services to the institution were regarded, was passed at a meeting of the Board of Management, held on the 15th of June in that year:

"The Chairman having laid before the Board a letter received from Dr. Waters, in which he announces the resignation of his appointment as a Physician to the Chester General Infirmary, the Board of Management desire to record the regret with which they receive Dr. Waters' announcement of his resignation. It brings to a close (to a great extent) the connection between him and the Infirmary of many years' standing, from which much essential benefit to the Institution has been derived. The Board are very sensible how great a weight his acknowledged ability and experience in the treatment of disease have given to the general reputation of the Infirmary, and consider his retirement to be a serious loss to the Institution.

"Whilst thanking him on his retirement for his long and valuable services, the Board feel assured that the Institution may still rely upon his medical aid and assistance, and, though no longer retaining his connection as one of the Honorary Physicians to the Infirmary, he will remain as a Consulting Medical Officer of the institution in conformity with the rule."

The chemists of Chester have also testified, in an address to Dr. Waters, the estimation in which they hold him. All classes in the city in which he resides have, indeed, combined to load him with proofs of their regard.

Dr. Waters married the youngest daughter of the late Reverend the Honourable Lorenzo Hely Hutchinson, and has two surviving children—one son, a captain in the Royal Artillery, and at present a student in the Staff College, and an unmarried daughter.

BIBLIOGRAPHY.

"A Treatise on Fever" (Gold Medal, University of Edinburgh, 1847), 8vo, 1847.

"Address in Medicine" (British Medical Association, 1859), 8vo, 1859.

SELECTED CONTRIBUTION.

Edinburgh Monthly Journal of the Medical Sciences: "Observations on Gun-Shot Wounds, made in the Hospitals of Paris, 1848," (1848).

WILLIAM IRELAND WHEELER,

B.A., M.D., M.Ch., M.K.Q.C.P.I., F.R.C.S.I.

WILLIAM IRELAND WHEELER, the distinguished Surgeon of Dublin, is the son of the late Mr. G. N. Wheeler, of Pembroke Road, Dublin, and of Annesborough House, County Kildare, who was descended from the Wheelers of county Kilkenny, through Joseph Wheeler, brother of Jonah Wheeler, Bishop of Ossory, consecrated in the year 1613.*

Mr. Wheeler was born in Kildare, and received his earlier education by private tuition, and subsequently at Fleury's School, Dublin. In 1862, he entered Trinity College, and studied Medicine in the school of the Royal College of Surgeons, as well as in Trinity College, Dublin, in the City of Dublin Hospital (where he obtained the Purser Studentship, by competitive examination, in 1865), and in Sir Patrick Dun's Hospital. He graduated as a Bachelor of Arts of the University of Dublin in 1866, obtained the licence of the Royal College of Surgeons in Ireland, and became also a Licentiate, and Licentiate in Midwifery, of the King and Queen's College of Physicians in Ireland, in the same year.

In the year 1865 he studied for six months at Netley, where he obtained the highest marks in Hygiene, etc., and where, at the same period, he published the record of his "Experiments on Ventilation in the Wards of the Convalescent Division of the Royal Victoria Hospital." Very shortly afterwards he obtained a commission in the Army Medical Department, and was sent to do duty at the Royal Infirmary, Dublin. During the epidemic of cholera in 1866, he was actively engaged in one of the districts of that city. He was, however, almost immediately selected for the Abyssinian expedition, in which he served with distinction as a staff assistant surgeon, and earned the medal. He received a letter of thanks from the then Director-General, Sir G. Logan, for his "Experiments on the Air of the Hospital Ship in Abyssinia, and Meteorological Observations," compiled during the expedition, which were published in a Blue Book in 1866. He served subsequently at Dover, Canterbury, and other places, and after about three years' service retired from the Department.

Mr. Wheeler then went to Dubin, where, in 1870, he took the degree of Bachelor of Medicine at his University, followed by the degrees of Doctor of Medicine and Master of Surgery, and gained the Membership of the King and Queen's

* Burke's "Peerage," 1885.


Faithfully yrs

College of Physicians. In 1871 he was appointed Demonstrator of Descriptive and Surgical Anatomy to the Royal College of Surgeons in Ireland—a post he has since resigned—and, in 1872, became Surgeon and Lecturer on Clinical and Operative Surgery to the City of Dublin Hospital. It was soon after this appointment that he had the opportunity of enjoying exceptional and rare advantages in his association with the eminent Surgeon and University Lecturer on Operative Surgery, Mr. Butcher, who selected him as his assistant in all his surgical operations. At this period of his career Mr. Wheeler achieved a brilliant success as a Lecturer on Surgery, and also as a teacher, in conjunction with the late Dr. Stoney, one of the most eminent and successful teachers of modern times. Many of their joint pupils, obtained remarkable distinctions, three of whom won, at the same examination, first places for the British Indian and Naval Medical Services. Mr. Wheeler, however, was soon obliged to relinquish this useful and lucrative employment, on account of his time being wholly occupied by his rapidly-increasing practice.

In the year 1874 he obtained the Fellowship of the Royal College of Surgeons in Ireland, and was afterwards elected a Member of its Council, a post which he resigned in 1877, in order to become Examiner for Letters Testimonial of the College. He was a Member of the Council of the Surgical Society of Ireland, until its amalgamation with the Royal Academy of Medicine. He was re-elected to the Council in 1878, of which he still remains a Member, and is also a Member of the Council of the Surgical Section of the Academy.

In 1882, Mr. Wheeler was elected Vice-President of the Royal College of Surgeons in Ireland, and, in the following year, the centenary of the College, he was elected President, and was at the same time President of the Surgical Section of the Royal Academy of Medicine. He repeatedly represented the College of Surgeons on deputations to the Ministers in charge of the Medical Acts Amendment Bill; and he was also chosen to represent the College as its delegate at the tercentenary of the University of Edinburgh.

Mr. Wheeler will always be remembered as one of the most successful of modern surgeons, whose large experience and keen discernment have enabled him with great clearness to lay many instructive and remarkable cases before his fellow operators. These have been presented to the Surgical Society of Ireland, the Surgical Section of the Academy of Medicine in Ireland, the Pathological Society of Dublin, and other bodies, and will be found recorded in the pages of the *Dublin Journal of Medical Science*, the *Medical Press*, the *British Medical Journal*, and elsewhere. Before adverting to several of these, however, it will be well to allude to a Presidential Address of great interest which Mr. Wheeler gave on the opening of the Surgical Section of the Academy of Medicine, for the session 1883-84, wherein he asked the question, "What has Society gained by the Progress of Modern Surgery?"

After treating of the expansion of the field of surgical art—the operation for intra-peritoneal tumours and for obstruction and intussusception, the successful issues consequent upon gastrotomy, abdominal section for superfætation, excision of the pylorus and portions of the intestine, the combating of disease of the kidney by operation upon its cysts, the progress of lithotrity and of conservative orthopædic and ophthalmic surgery, the controlling of hæmorrhage, the recent treatment of aneurism, and other subjects, which he rightly said make surgery "a far grander and nobler science than was that of former years,"—he proceeded to speak characteristically of antiseptics and Listerism. "By Listerism," he said, "I understand the use of a spray, the use of protective, and gauze specially prepared. . . . . I lay particular stress upon this definition of the system, for it is thought by many that antiseptic surgery must mean Listerism, and that unless wounds are dressed according to the system called Listerism, they are not treated antiseptically.

"Now, by antiseptic surgery," he continued, "I understand that which aims at securing healthy wounds, and the repair of the same, as quickly as possible, by the most exact cleanliness—surgical cleanliness, which is the destruction of all matters which would prove poisonous. Hence, to those who practise surgery in this wholesome way, the term antiseptic becomes almost an opprobrium; for to say 'I have treated *such a case* antiseptically,' leaves it open to be inferred that, on some occasions, I do not practise cleanliness in a surgical sense, that I have not destroyed or removed all matter that is, or may become, poisonous. To ask a scientific, well-educated surgeon if he treated such a case antiseptically is almost offensive, and if a surgeon constantly repeats, 'I treated such a case antiseptically,' he seems to me, in other cases, to disparage his own surgery; and if he says, 'I treated such a case according to Listerism,' then we know that he still practises in darkness—still imagines that he can wash the air of germs by means of a spray, and keep them from a wound by gauze and protective. But as there is sufficient proof that this Listerian system is fast dying—indeed, we may call it dead—as is evidenced by the number of eminent men who have abandoned it, I will only now enquire how it came to so early a death. Firstly, it was weighed in the balance of careful and scientific research, and found wanting—it has since been found dangerous; secondly, those who attempted to continue its advocacy—some from ignorance of the subject—damaged their cause. What confidence could be possibly placed in anyone who, when advocating this system, concluded in allusion to germs by saying—'You may call them bacteria if you like, but I call them little white maggots.' Imagine ultra-microscopic objects compared to white maggots; fancy any reasonable person imagining he could see with the naked eye the bacteria termo, ·0015 mm! How ludicrous, were it not lamentable, such a statement!"

In concluding this address, Mr. Wheeler referred to Reparative or Plastic Surgery, which is a field he himself has laboured in. "Truly," he said, "the operation for hare-lip can now be accomplished with such surgical artistic skill, that Nature herself is rivalled by the beauty of the repair." This is a result to which Mr. Wheeler's own experience, founded upon large numbers of cases of deformity of the face, has greatly contributed, and for some of the more important of these cases the reader is referred to his useful contribution on "Operative Treatment of Hare-Lip." Mr. Wheeler thinks it impossible to lay down dogmatically any hard-and-fast rule as to the exact period for operative interference in every case of hare-lip, but there are circumstances he says, that may demand an operation immediately after birth. In ordinary cases he would choose from *three to six weeks after birth, and within three months;* but of the advantages of early operations he thinks there can be no doubt. With regard to operation there are several results to be looked for—the most important indication is to join the fissure; but there are others, in his mind, not less important. Thus it seems equally essential that the beautiful prolabial (red marginal) curve should be restored, the unsightly notch prevented, the fossa labialis formed, and the nose, whether distorted on one or both sides, restored to its proper position. Such results cannot be obtained by inexperienced hands, nor by those ignorant of the anatomical relations of the mouth. Truly, surgical artistic skill, such as Mr. Wheeler's, is much required in this operation. He has not been able to appreciate or to see any advantages in fanciful operations, such as Giraldes' mortise, Mirault's, Sédillot's, nor Henry's; indeed, these, he thinks, interfere with the desired results, for the surgeon, operating after their manner, cannot possibly preserve the perfect curve of the red margin, nor can there be the most tension over the incisive fossa, so necessary to cause a slight protrusion at the lower border. With regard to the intermaxillary bone protrusion, Mr. Wheeler has adopted with Marjolin, Huguier, Butcher and Gensoul, the procedure of bending it into the place it should occupy. The form of suture he prefers is the twisted—a neat and long hare-lip needle, finely pointed—or the one used by Mr. Butcher. In order to prevent hæmorrhage from the coronary arteries, he has devised the "arterial compressors," which have, in his hands, fulfilled the requirement in every case; and, in regard to cutting instruments, he has found the scissors the best, to which he has added a sheath on the underblade. Looking at the illustrations which accompany his essay, we are enabled to see what excellent results have followed his operations, nature herself being truly rivalled in them.

Many years ago, Mr. Wheeler brought before the Surgical Society of Ireland a remarkable case of pharyngotomy, the first of the kind performed in that country, in which, upon operation, he was enabled successfully to remove a needle closely impacted in the pharynx. A second case of pharyngotomy was reported by him in 1884 to the

Surgical Section of the Royal Academy of Medicine, wherein he had removed from the pharynx of a lady, who rapidly recovered, a tumour (spindle shaped sarcoma) which obstructed the food and air passages, threatening suffocation. The patient, however, subsequently succumbed from a recurrence of a similar growth some months later in a different situation. Mr. Wheeler emphasizes the necessity, in such cases, for a free external incision—a small incision—in the pharynx (which can be dilated), so that the filaments of the nerves may not be irreparably injured, and permanent hoarseness probably ensue ; no sutures, he says, should be employed in the gullet, and plenty of drainage room should be left in the wound. There is, he finds, no occasion whatever to feed the patient afterwards with a tube ; sufficient nourishment can be administered, and the introduction only retards repair. He believes this operation, if dexterously performed, not to be a fatal one. In November, 1886, Mr. Wheeler published in the *Dublin Journal of Medical Science*, his case of "Pharyngocele and Dilatation of Pharynx, with existing Diverticulum at lower portion of Pharynx lying posterior to the Œsophagus, cured by Pharyngotomy," being the first operation of the kind recorded.

Early in the year 1883 Mr. Wheeler read before the Surgical Section of the Academy of Medicine in Ireland an epitome of cases, that came under his care and were treated by trephining, for mastoid and tympanic disease, which was very favourably noticed by the *Edinburgh Review*. This circumstance induced him, in the following year, to record another case successfully treated for similar disease, on which he is now an undoubted authority. "It might be well," said the *American Journal of the Medical Sciences*, "for many other patients to fall into the hands of one so competent as he is to deal with mastoid disease. His report includes—besides the account of his cases—some very interesting remarks on the *rationale* of mastoid and tympanic disease, and the anatomical relations of the parts involved. This paper is admirable." The most important surgical result of Mr. Wheeler's experience and researches is his indication of the safest and most suitable site for the operation of trephining. The site he would select for operation, with certain exceptions, would be such as to place the lower border of the trephine on a level with the external auditory meatus, and anterior to a line dividing vertically the mastoid process. "By adopting this course," he says, "there will be no danger of wounding the lateral sinus, the tympanum and mastoid cells will be opened, giving full exit for discharge, the dura mater will be exposed, and, should pus exist between it and the cranium, there will be ample freedom for its escape."

Mr. Wheeler has reported some other very remarkable and exceedingly rare operations to the Surgical Section of the Academy of Medicine, which deserve mention here. Two of these were of excision of the clavicle, an operation which

Mr. Erichsen describes as amongst the most hazardous in surgery; one of these being a complete case for tumour (osteo-sarcoma), the only such operation performed in Ireland, and the other a partial excision for necrosis. At the same time he recorded three cases of resection of the humerus at the shoulder joint—the first being of excision of the right shoulder joint and portion of the glenoid cavity (female); the second, of excision of the left shoulder joint (male); and the third, of excision of the left shoulder joint, portion of the glenoid cavity, and part of the acromion process (male), with perfect recoveries in each case.* He has also made contributions on "Resection of the Wrist-Joint," and on "Conservative Surgery of the Foot and Ankle-Joint." His *brochure* on the latter subject deals with cases of excision of os calcis, and of astragalus, medio-tarsal operation, excision of os calcis, astragalus, and malleoli, removal of cuboid, scaphoid, cuneiform, and metatarsal bones, and resection of first phalango-metatarsal articulation. Mr. Wheeler has made many other valuable contributions to modern surgical literature, and he is known as the inventor of an ingenious apparatus for the treatment of fracture of the patella, whereby bony union is secured. He is a member of several learned societies both in England and Ireland; and is Surgeon to the City of Dublin Hospital, and Lecturer on Clinical and Operative Surgery; Consulting Surgeon to the National Institution for the Blind of Ireland; and Consulting Surgeon to the National Lying-in Hospital.

* Read before the Surgical Section of the Academy of Medicine in Ireland, March 20th, 1885.

BIBLIOGRAPHY.

"Experiments on Ventilation in the Wards of the Convalescent Division of the Royal Victoria Hospital, Netley" (Army Medical Department Statistical, Sanitary, and Medical Reports), 1865.

"Experiments on the Air of the Hospital Ship in Abyssinia, and Meteorological Observations" (Blue Book), 1866.

"What Society has Gained by the Progress of Modern Surgery," 1884, 17pp.

"Conservative Surgery in Diseases of the Foot and Ankle-Joint," 1887, 15pp.

Selected Contributions.

Dublin Journal of Medical Science: "Successful Removal of an Enormous Lipomatous Tumour from the Head, a foot and a half in length," 1873; "On the Operative Treatment of Hare-Lip," 1880; "Cases of Pharyngotomy," 1884; "Trephining in Mastoid and Tympanic Disease," 1884; "On Excision of the Clavicle," 1885; "Pharyngocele and Dilatation of Pharynx, with existing Diverticulum at Lower Portion of Pharynx lying posterior to the Œsophagus, cured by Pharyngotomy," 1886.

Medical Press and Circular: "Sciatic Dislocation of Hip Reduced," 1873; "On a New Apparatus for Fractured Patella," 1873; "Successful case of Pharyngotomy, being the first case of the kind in Ireland," 1875.